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**DEVELOPMENT AND PRELIMINARY EVALUATION OF A MEDIA-BASED HEALTH EDUCATION INTERVENTION TO REDUCE MENTAL DISORDER-RELATED STIGMA AMONG NURSING STUDENTS IN JEDDAH, SAUDI ARABIA**

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**The Florence Nightingale Faculty of Nursing and Midwifery**

DEVELOPMENT AND PRELIMINARY EVALUATION OF A  
MEDIA-BASED HEALTH EDUCATION INTERVENTION TO  
REDUCE MENTAL DISORDER-RELATED STIGMA  
AMONG NURSING STUDENTS IN JEDDAH, SAUDI  
ARABIA

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Thesis submitted for the degree of Doctor of Philosophy

University of London

June 2015

## **Declaration**

I declare that the work presented in this thesis is my own.

Signed..... Dated.....

## **Abstract**

**Background:** Mental disorder-related stigma, usually experienced through prejudice or discrimination, can gravely impact an individuals' quality of life. Nurses play an important role in the advocacy and treatment of people with mental disorders. It is therefore important that their attitudes, behaviour and knowledge regarding people with mental disorders are understood within their cultural context and that they are educated appropriately during their early student years.

**Aim:** To develop and evaluate the usability, feasibility and effectiveness of a media-based educational intervention (film) against education as usual practice (lecture), in reducing mental disorder-related stigma in terms of attitudes, knowledge and intended behaviour amongst Saudi nursing students.

**Methods:** The research study draws upon the first two phases (development and feasibility/piloting) of the Medical Research Council's framework for the development and evaluation of complex interventions. A mixed-methods research design was used, entailing: theoretical and systematic reviews of evidence-based literature; modelling, developing and refining of the intervention-prototype and outcome measures; usability testing with stakeholders; feasibility testing of the refined intervention through an exploratory randomised controlled trial and a qualitative evaluation study to assess the preliminary effectiveness of the intervention. Outcomes were measured at three time points: baseline, immediately post-intervention and at three months follow-up.

**Results:** Outcome measures improved significantly for both intervention conditions in comparison to the control group; however, there was no significant difference in effectiveness between the intervention conditions. The film intervention was more effective in the 3<sup>rd</sup>-year and the lecture in the 4<sup>th</sup>-year nursing students. The findings of the qualitative evaluation study showed that student nurses expressed a preference for the inclusion of service users' personal testimonies in the educational intervention. They were also more likely to remember this component of the intervention than other aspects when in clinical practice.

**Conclusion:** This study contributes to a growing literature supporting the use of filmed social contact interventions containing personal testimonies as an effective educational option to reduce mental disorder-related stigma amongst healthcare students.

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## **List of common abbreviations:**

**ANOVA:** Analysis of Variance

**CBA:** Controlled Before and After

**CCT:** Controlled Clinical Trial

**CCCRG:** Cochrane Consumers and Communication Review Group

**CLEI:** Clinical Learning Environment Inventory

**CONSORT:** Consolidated Standards of Reporting Trials

**DVD:** Digital Versatile Disc

**EAG:** Expert Advisory Group

**EAU:** Education As Usual

**GLM:** General Linear Model

**KAU:** King Abdul-Aziz University

**MICA:** Mental Illness Clinician's Attitudes

**MoH:** Ministry of Health

**MRC:** Medical Research Council

**NICE:** National Institute for Health and Care Excellence

**PPT:** PowerPoint Template

**PRISMA:** Preferred Reporting Items for Systematic Reviews and Meta-Analyses

**RCT:** Randomised Controlled Trial

**RIBS:** Reported and Intended Behaviour Scale

**SCILO:** Social Contact Intended Learning Outcomes

**SPSS:** Statistical Package for the Social Sciences

**T0:** Baseline Time point

**T1:** Post-intervention Time point

**T2:** Follow-up Time point

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# CHAPTER 1

## Background and overview of the thesis

### 1.1 Introduction

The purpose of the study that this thesis presents was to develop and evaluate a novel intervention that reduces stigma among Saudi nursing students. This chapter explores the components of the research problem, providing context for the factors that exacerbate problems of stigma for those with mental disorders. This chapter provides an overview of stigma, with a special focus on public stigma related to mental disorders. In Section 1.2 the term ‘stigma’ is defined and its historical origins are discussed, then Section 1.3 addresses the public stigmatisation of mental disorders. Section 1.4 discusses how mental disorder-related stigma can affect the multiple domains of service users’ everyday life before summarising the overall impact of these factors on mental disorders and the relationship to this study. Section 1.5 then sets out the overall aims and objectives of the research study. The chapter concludes in Section 1.6 with a chapter-by-chapter breakdown of the thesis.

### 1.2 Stigma: definition and origins

Stigma is a term that refers to the way society marks the dissimilarities of the ‘one’ relative to the social constructs of normality of the ‘rest’, resulting in the marginalisation and exclusion of the marked one. The term has its etymological roots in the Latin word *stigmat*, with its earliest documented use in English believed to be in the early 15<sup>th</sup> century, in Wycliffe’s apology for Lollard doctrines:

Ȝe schal not prik ȝor flesch, ne mak to ȝow ani figeris, ne **stigmes**,  
þat are woundis (Wycliffe and Todd, 1842, p. 92).

This can be rendered in modern English as:

Ye shall not prick your flesh, nor make to you any figures,  
nor **stigmes**, that are wounds.

Historically, stigma referred to actual physical marks, made by the ancient Greeks and Persians in the form of burns or tattoos upon the hands and ankles of slaves and

condemned criminals as a visible demonstration of their deviance from social conformity (Jones, 1987). Contemporarily, stigma may be defined as:

- a. **figuratively;** A mark of disgrace or infamy; a sign of severe censure or condemnation, regarded as impressed on a person or thing; a 'brand'
- b. A distinguishing mark or characteristic (of a bad or objectionable kind); in **Pathology**, a sign of some specific disorder, as hysteria. (Oxford English Dictionary, 2014)

### 1.3 Public stigma of mental disorders

Stigma has been identified as a key variable in explaining the experience of a mental disorder. Our understanding of stigma as applied to mental disorders owes much to the seminal work of Ervin Goffman (1990), who provides descriptions of the concepts of stigma and social identity. Taking a social interactionist perspective, he conceives stigmatisation as a process through which attributes or “marks” that are of a “deeply discrediting” nature diminish an individual “from a whole and usual person to a tainted, discounted one” (p.12). Stigma within the context of mental disorders is therefore seen as a reflection of the way members of society tend to react to a particular individual or group with a mental disorder. The impact of a mental disorder on the individual suffering from it is twofold. People with mental disorders have to deal not only with the actual symptoms of the disorder but also with the stigma of the label “mentally ill” (Corrigan et al., 2000; Rush et al., 2005). Moreover, mental health service users commonly report that the effects of the stigma are equally if not more devastating than the disease process itself (Corrigan et al., 2005a).

Goffman (1990) distinguishes between “discredited” and “discreditable” stigma (p.14), depending on how obvious the unfavourable trait is. A discreditable stigma is concealable or invisible, such as one associated with a medical condition (e.g. cancer or being HIV positive) or mental disorder (e.g. depression), with having a history of criminal offences, or even with sexual orientation. In contrast, a discredited stigma is related to something obvious and apparent (e.g. skin colour or being in a wheelchair); such a stigma is non-concealable and usually affects both the individual and others interacting with him. Goffman (1990) identifies three categories of stigmatising attributes: those related respectively to ‘physical deformity’ and to ‘blemishes of individual character’, and ‘tribal stigma’, which is transmittable via one’s lineage.

Mental disorder-related stigma falls into Goffman's second category. Researchers have proposed certain attributes that are stigmatised cross-culturally (Major and O'Brien, 2005) and Goffman's categories map closely onto the attributes proposed by contemporary researchers as forming the basis of social exclusion. These attributes indicate that individuals who are stigmatised as mentally disordered are treated in this way because they are seen as being likely to make poor partners or as having the possibility of carrying a communicable disease; or else they are excluded for the presumed greater good of the community (Park et al., 2003; Kurzban & Leary, 2001). Another line of contemporary research into the stigma of mental disorder seeks to determine whether it is the behaviour related to the disorder itself or the label of being mentally ill which triggers stigmatisation (Angermeyer & Matschinger, 2003; Link and Phelan, 2001).

Cross-culturally, the destructive effects of stigma are experienced at two levels: 'public stigma' (also referred to as social stigma) and 'self-stigma' (Corrigan et al., 2005a; Padmavati, 2014). Corrigan et al. (2005a, pp. 179-180) define public stigma as "the phenomenon of large social groups endorsing stereotypes about and acting against a stigmatised group: in this case, people with mental illness", whereas self-stigma is "the loss of self-esteem and self-efficacy that occurs when people internalize the public stigma" and therefore turn the stigmatising attitudes and stereotypes against themselves. Public stigma is often expressed in the form of prejudicial attitudes or discriminatory behaviour against those individuals with mental disorders, leading to avoidance, social exclusion, unemployment, denial of human rights, family and relationship issues, as well as unfair treatment and housing options, which in turn are likely to affect recovery prospects negatively (Padmavati, 2014). In contrast, self-stigma presents as internalised stigma experienced by individuals with a mental disorder, who start to believe the stereotypes suggested by society. This may lead them to have negative beliefs about themselves, such as believing themselves to be incompetent, and experiencing negative emotions, such as low self-efficacy, hopelessness or worthlessness, which in turn lead to a negative behavioural response including avoidance. For example, they may not seek out housing opportunities or may feel unable to find work or pursue a career (Rush et al., 2005).

## **1.4 The impact of mental disorder-related stigma on everyday life**

The stigma of a mental disorder can harm the individual in several domains of everyday life, which include but are not limited to the following: interpersonal relationships, employment, law enforcement and justice, housing, accessing healthcare, treatment and recovery (Thornicroft, 2006; Corrigan et al., 2004). The following sections review relevant literature on the consequences of public stigma in relation to the multiple domains of everyday life.

### **1.4.1 Stigma and interpersonal relationships**

Public stigma towards people with mental disorders is usually based on shared misconceptions regarding mental illness, whereby fears of danger or violence commonly result in social distance (Penn et al., 1999). Public stigma impacts not only individuals experiencing mental illness but also those supporting and caring for them (Corrigan et al., 2005a), whether family, friends or healthcare professionals, in a process referred to as ‘stigma by association’ (Ostman and Kjellin, 2002) or ‘courtesy stigma’ (Goffman, 1990). A study of psychological experiences related to stigma by association in 162 carers found that 10% of them had considered taking their own lives and another 18% reported that it would be better if the person with mental health problems were dead (Ostman and Kjellin, 2002).

The INDIGO study (International Study of Discrimination and Stigma Outcomes), which involved a cross-sectional survey of 732 individuals with schizophrenia in 27 countries, using the Discrimination and Stigma Scale (DISC), found that the discrimination that they experienced affected a number of life domains but was highest in the area of interpersonal relationships, affecting 47% of respondents in making or keeping friends, 43% in dealings with relatives and 27% in personal or sexual relationships (Thornicroft et al., 2009). This finding is consistent with that of studies of depressive disorders, as indicated by the results of a further cross-sectional survey (Lasalvia et al., 2013) stemming from the INDIGO study and using the same scale, but this time on 1082 individuals with depressive disorder in 35 countries. This study found that the experience of discrimination was highest in the area of making or keeping relationships, affecting 37% of participants.

In a recent exploratory qualitative study, Hamilton and colleagues (2014) examined the experiences of discrimination of 23 individuals with mental health problems randomly



chosen from five NHS trusts in the UK. From structured telephone interviews with participants the authors identify seven themes related to discrimination: “organisational decisions, mistreatment, social distance, stereotyping and being judged, lack of understanding or support, dismissiveness and over-protectiveness” (Hamilton et al., 2014). These were discussed in relation to relationships with family, friends, neighbours and employers, as commonly reported by the participants. Social distance was found to be a common discrimination theme among all groups and although themes of support and empathy also emerged from family and friends, these were at times perceived as patronising and constituting negative discrimination in the form of over-protectiveness.

Breslau et al. (2011) conducted a large cross-national survey of the relationships of mental disorders to marriage and divorce in low, medium and high-income countries. There were 46,128 marriages amongst people with mental disorders in 19 countries and 30,729 divorces in a subset of 12 countries. The study found that all 18 mental disorders under consideration were linked to a reduced chance of marriage (odds ratios 0.6-0.9) and an increased likelihood of divorce (odds ratios 1.2-1.8). These associations were particularly strong in major depression, specific phobia and alcohol misuse.

#### **1.4.2 Stigma and employment**

The numerous benefits of work for individual wellbeing are indisputable; similarly it can be argued that there is a causal link between unemployment and poor health (Waddell and Burton, 2006). Employment is considered an important factor in helping individuals to cope with mental illness and surveys show that they tend to want to work (Warner, 2002). However, research has also shown that people with mental health problems often either fail to find work (for example, employers are reluctant to hire them) or cannot maintain a job because of discrimination. A survey of attitudes to employing people with mental illness among 200 businesses in the UK found that employers were reluctant to hire potential employees with a history of mental health problems, reflecting stigmatising attitudes and lack of knowledge regarding mental illness (Manning and White, 1995).

Statistics show that about 75-85% of people with mental illness in the USA are unemployed, while the equivalent figure in the UK is estimated to be 61-73% (Crowther et al., 2001). One of the suggested factors behind these numbers is that individuals with mental health problems experience negative discrimination, as supported by the INDIGO study, where 29% of respondents with schizophrenia reported discrimination when it

came to finding or maintaining a job (Thornicroft et al., 2009). It is also reflected in the subsequent study of participants with depressive disorders, which reported that 25% had refrained from applying for a job and 20% from entering education or training (Lasalvia et al., 2013).

In a more positive light, when Little and colleagues (2011) used telephone interviews to survey 550 employers on changes in mental health-related knowledge, attitudes and workplace practices between 2006 and 2009, they found that mental health knowledge had increased significantly, as reflected by a drop from 33% to 7% of employers who believed that none of their employees would develop a mental illness. Over the same period, the proportion of employers willing to make special arrangements for employees with mental illnesses increased from 68% to 87%, while acknowledgment of the need for more support to deal with mental health in the workplace increased from 76% to 88% (Little et al., 2011). However, Henderson et al. (2013) warn that although knowledge of mental illness has improved and there is now widespread acceptance of the desirability of accommodating the needs of employees with mental illness, there has been little actual change in policy with regard to mental health in the workplace or improvements to make work more mental health friendly. The problem nowadays is less to do with discriminating when hiring than with implementing changes in workplace policies and procedures to make working less stressful and more accommodating.

#### **1.4.3 Stigma in the law enforcement and justice system**

Individuals displaying symptoms of serious mental disorders are more likely to be arrested by the police and tend to spend more time in prison than individuals without mental disorders (Corrigan, 2004). Lamb and Weinberger (1998) conducted a literature review to examine the reasons for there being so many people with severe mental disorders in prison and found these to include institutionalisation, lack of community engagement and support, difficulty in obtaining community treatment as ex-offenders, and the overall negative attitudes and beliefs of the law enforcement system. More recently, Pinfold and colleagues (2003) conducted a study to evaluate the effect of a two-hour mental illness educational workshop on the knowledge, behavioural intentions and attitudes of 109 UK police officers towards individuals with mental disorders. Although the authors report a positive change in mean attitude scores, there was no change in the stereotype linking people with severe mental disorders to violence.

#### **1.4.4 Stigma and housing**

Studies have shown that independent housing or halfway houses, as opposed to institutions, have many positive benefits for mental health service users' wellbeing (Bengtsson-Tops and Hansson, 2014) and overall quality of life (Patterson et al., 2013). Hence, the trend in most Western countries has been to deinstitutionalise service users and integrate them into community settings (Thornicroft, 2006). Notwithstanding the many merits of deinstitutionalisation, however, this transition has been less than smooth. Studies have consistently reported a lack of affordable, safe housing that meets the special needs of service users (Patterson et al., 2013; O'Hara and Miller, 2001) and the persistence of challenges in forming partnerships with landlords for such supportive housing facilities, as they prefer to avoid renting to individuals with mental illness (Nelson et al., 2014). Moreover, statistics show that a third of the homeless population currently comprises individuals with mental health problems and/or addiction comorbidity (Belcher and Deforge, 2012).

A survey of the stigma experiences of 1,842 individuals with severe mental illness in a multi-state study in the United States revealed that half had experienced some form of discrimination, most often in relation to housing or employment (Corrigan et al., 2003). This finding is consistent with a systematic review of literature on public stigma of mental illness in the United States (Parcesepe and Cabassa, 2013). One example of such housing discrimination is landlords refusing to rent to applicants on the sole basis of their psychiatric history or in extreme cases agreeing only if a prospective tenant is willing to undergo psychiatric evaluation (Bengtsson-Tops and Hansson, 2014). Another is the 'not in my backyard' attitude, where community members refuse to welcome supportive housing or half-way housing for service users near where they live (Kirby and Keon, 2006), such protests usually stemming from a fear of the unknown or misconceptions about mental illness. Alternatively, members of the community may argue that allowing such a facility into their neighbourhood would reduce the value of their own property (Thornicroft, 2006). A further form of discrimination is practiced by the media, which often portrays homelessness as arising because service users do not take their medication, which suggests that they are responsible for the problems they experience (Belcher and Deforge, 2012).

#### **1.4.5 Stigma and treatment/recovery**

People with mental illness report that the stigmatisation they face negatively affects their psychological wellbeing and other areas of their treatment and recovery (Wahl, 1999; Hanson et al., 2013). A systematic review of 144 studies of the effect of stigma on help-seeking amongst people with mental health problems found that it had a moderate negative effect relative to other barriers mentioned and that participants refrained from help-seeking because of fear of being judged negatively, feelings of shame or concerns related to confidentiality and disclosure (Clement et al., 2015). World Health Organisation (WHO) mental health surveys also show that stigma is a factor behind service users discontinuing treatment or dropping out of it altogether (Andrade et al., 2014). Furthermore, those who do continue to seek treatment are likely to receive a lower quality of care in comparison to those being treated for physical illnesses (Lawrie, 1999). Thus, stigma not only acts as a barrier to treatment access but has also been found to significantly affect recovery prospects, particularly in disorders such as schizophrenia (Calabrese and Corrigan, 2005). As to attitudes among the general population, public stigma can lead to extreme views on coercive treatment, sectioning and institutionalisation (Corrigan and Watson, 2002). A survey of 1444 members of the public found that more than two-thirds of participants perceived people with severe mental illness as dangerous and were in favour of coercive treatment and forced sectioning (Pescosolido et al., 1999).

#### **1.4.6 Stigma by healthcare professionals**

Studies have shown that service users are the victims of discrimination and stigmatisation not only from laypeople but from healthcare professionals as well. Recent literature reviews, such as that of Wahl and Aroesty-Cohen (2010), make recommendations to improve attitudes among caregivers towards patients with mental illnesses. Similarly, Ross and Golders (2009) reviewed research studies investigating mental health related stigma amongst nurses found that patients with mental illnesses and members of their families consistently felt that they were treated in a dehumanising manner, lacking care and dignity. General physicians and psychiatrists alike are also guilty of patronising patients with mental illnesses (Mukherjee et al., 2002; Aydin et al., 2003; Ucok et al., 2004; Thornicroft et al., 2010), the consequences of which may be grave, involving poor patient engagement and compliance with treatment (Fernando et al., 2010) or avoidance

of psychiatric treatment altogether, as explained in the forgoing discussion (Thornicroft et al., 2010).

Stigmatising attitudes amongst mental healthcare professionals have been found to develop early (Thornicroft et al., 2010), during nursing school training and undergraduate medical studies, a finding which stands true cross-culturally (El-Gilany et al., 2010). In a British study of the attitudes of medical students and doctors in a London teaching hospital, over half of the sample believed that patients with mental disorders such as schizophrenia, drug and alcohol addictions were unsafe and unpredictable (Mukherjee et al., 2002). When this study was replicated in a teaching hospital in Sri Lanka, similar stigmatising attitudes were reported by medical students, in addition to the view that patients with mental illnesses are ‘blameworthy’ (Fernando et al., 2009). In Turkey, Ay et al.’s. (2006) survey the attitudes of second and sixth-year medical students towards mentally disabled individuals, found that while the older students had less negative attitudes than younger students, they still presented with striking stigmatising opinions and judgements with respect to disorders such as schizophrenia. Finally, a Japanese study of the relationship between psychiatric training and nursing students’ attitudes to individuals with mental illness report that students at the pre-training phase emphasised negative words and labels such as ‘scary’ (Yamauchi et al. 2011).

#### **1.4.7 Summary of impact of mental disorder-related stigma on everyday life**

In summary, studies of the impact of mental disorder-related stigma on the domains of everyday life show that public stigma tends to have detrimental effects on the lives of those suffering from mental disorders, for example leading to breakdown in relationships; difficulties finding or maintaining employment; increased likelihood of arrest and imprisonment; barriers to accessing safe and suitable housing; and finally impacting on use and engagement with healthcare professionals and treatment regimes. These studies show that the public stigma of mental disorders is commonly linked to stereotypical beliefs of dangerousness and violence, negative attitudes and limited knowledge of the actual nature of mental disorders. These perceptions, as stated, are not limited to the public but also affect healthcare professionals. As a result, researchers have recommended future studies to examine the theories behind stigma reduction strategies, and to develop different types of interventions aimed at diminishing stigmatising attitudes to mental disorders among healthcare professionals. Development of this type of study

among healthcare students was seen as particularly important as the literature revealed that many stigmatising attitudes and behaviours could develop during early training years. The following section introduces the aims and objectives of this study, which responds to this critical need.

### **1.5 Aim and objectives of the study**

According to Collins et al. (2011), one of the top twenty-five challenges in global mental health is raising awareness of the global burden of mental disorders by developing culturally informed interventions to eliminate the social stigmatisation, discrimination and social exclusion of those with mental disorders, as well as their carers. Such interventions target the public at large, but healthcare professionals and healthcare students represent an important portion of this general population, as studies have shown that they too share commonly held stigmatising attitudes and beliefs about mental disorders. Indeed, given the significant role that healthcare students can play in raising awareness and knowledge of mental disorders, it would seem particularly important for such people to be aware of their own stigmatising attitudes and beliefs and of how these can negatively affect the care they provide to users of mental health services.

The present study involves the development and preliminary evaluation of a culturally sensitive complex media-based health educational intervention to reduce the public stigma of mental disorders held by student nurses training in Saudi Arabia. The study design follows the procedure for the development and evaluation of complex interventions in healthcare, advocated by the British Medical Research Council (MRC) (Craig et al., 2008).

Throughout this thesis, the term ‘mental disorder’ is used to refer to all mental disorders specified by the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) (APA, 2013) that result in disability or distress. However, use of the term in the present study excludes developmental or learning disabilities, including neurocognitive disorders such as Alzheimer’s and Parkinson’s, and neurodevelopmental disorders such as Tourette’s and autism, since the intervention developed and tested in the present study is not designed to address public stigma towards people with such disorders.

The overall aims of this study were to:

1. Develop a novel educational intervention grounded in an understanding of how mental disorder-related stigma is generated and maintained.
2. Evaluate the preliminary acceptability, effectiveness and feasibility of the intervention in reducing mental disorder-related stigma in a sample of Saudi undergraduate nursing students.

The overall study objectives were to:

1. Develop a conceptual framework to explain the maintenance of mental disorder-related stigma in Saudi nursing students, grounded in the existing research literature.
2. Develop a media-based educational intervention (DVD) within the above conceptual framework, designed to reduce mental disorder-related stigma in Saudi nursing students.
3. Assess the feasibility and acceptability of the DVD intervention and make necessary revisions.
4. Evaluate the impact of the DVD intervention on students' knowledge, intended behaviour and attitudes towards people with mental disorders in an exploratory randomised trial, in which the intervention is compared with an education-as-usual intervention.
5. Explore the possible effects of a three-month clinical placement in an inpatient mental healthcare setting on final year nursing students' knowledge, intended behaviour and attitudes towards people with mental disorders.
6. Identify salient aspects of the clinical placement experience perceived by students to have influenced their views about people with mental disorders.

## **1.6 Structure and organisation of the thesis**

The thesis is organised as follows:

**Chapter 1** has introduced the rationale for the study and the research problem, stigma, and its historical origins. There was then a discussion of the negative consequences of

mental disorder-related public stigma and how it can influence the multiple domains of everyday life. Finally, the aim and objectives of the research study were presented.

**Chapter 2** provides a contextual literature review of mental disorder-related stigma within the Arab world, with a special focus on Saudi Arabia, where this study took place. It highlights the influence of the culturally specific factors that have a role in influencing mental disorder-related stigma among Saudi nursing students that differ to those found in the Western world where the majority of data on this topic has emerged.

**Chapter 3** describes the research design used to conduct this study. It explains the MRC phased approach for the development and evaluation of complex interventions (Craig et al., 2008) while focusing on the first two phases: development and feasibility/piloting, and how they are applied to the present study.

**Chapter 4** examines theories, which explain the development, generation and maintenance of public stigma in relation to mental disorders, and considers their merits and limitations. It also reviews the theories of stigma reduction and strategies to reduce mental disorder-related stigma.

**Chapter 5** presents a systematic literature review of educational interventions used to reduce mental disorder-related stigma amongst healthcare professionals, including students.

**Chapter 6** draws upon the findings of chapters 4 and 5 to develop the educational intervention prototype tested in the present study. It details the modelling, building, usability testing and refining of the intervention prototype and its comparative condition within the development phase of the study. The DVD that accompanies this thesis should be watched at this point, prior to reading the following chapter.

**Chapter 7** reports the findings of the feasibility/piloting phase of the study. It explains the pilot testing of the refined intervention for feasibility against its comparative condition in an exploratory randomised trial. The impact of the intervention on the knowledge, attitudes and intended behaviour of Saudi nursing students towards people with mental disorders is presented.



**Chapter 8** describes the process evaluation of the exploratory trial through a thematic analysis of nursing students' experiences, using qualitative face-to-face guided interviews.

**Chapter 9** discusses the results of the exploratory randomised trial and its process evaluation in relation to the research aims and objectives and reports of previous trials. The chapter concludes the thesis by considering the contribution of the research study to knowledge, its limitations and its implications for clinical practice and future research.

## **CHAPTER 2**

### **Mental disorder-related stigma in the Arab world: a contextual review**

#### **2.1 Introduction**

The purpose of this chapter is to describe the geographical and cultural context of the present study through reviewing the literature on mental disorder-related stigma within the Arab world. The chapter serves to provide context for the reader into how Saudi nurses may perceive people with mental disorders as influenced by the cultural context within which they live.

Section 2.2 describes the geographical area of the Middle East and North Africa (MENA), focusing on Saudi Arabia. The literature drawn upon in this section is from empirical journal publications and newspaper articles. The newspaper articles were limited to the year 2013 and these data provided current context for what the nursing students would be reading and influenced by. An early search revealed that there were limited articles relating to the topic published in 2013, therefore the search was widened so that the time limit was up to 2014. Other sources of media were not included, for example social media platforms, as the data collection and analysis required for this were beyond the time and resources available for the present study. Section 2.3 sets out the aim and scope of the literature review and the review methods used. Section 2.4 presents the findings gathered from newspaper and journal articles, which are then summarised in Section 2.5. Section 2.6 concludes the chapter by identifying common stigmas related to mental disorders within the MENA region.

#### **2.2 Mental health in the Arab world**

##### **2.2.1 The Arab world**

The term ‘Middle East’ is a Eurocentric label reflecting the old British perception of the East separated into middle, near and far, relative to Britain as a point of reference. The use of the term has been criticised as perpetuating a label created by outsiders rather than a description that stems from within the region of interest, suggestive of a power and control relationship (Hanafi, 2000). The term preferred by people from within the region of interest is ‘Arab world’. Alternatives include ‘Islamic world’ and ‘Muslim world’.

Although not all the countries within the region share the same religious beliefs, the majority of the countries in the Arab world share unifying traits, in terms primarily of culture and, to a lesser extent, of religion and language (Mohit, 2001). The acronym MENA is commonly used by international organisations such as the United Nations International Children's Emergency Fund (UNICEF) and the World Health Organization (WHO) to designate the geographical region of the Arab world. According to these two bodies, the MENA region comprises the following countries: Afghanistan, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, occupied Palestinian territory, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates (UAE) and Yemen (Figure 2.1).



**Figure 2.1** Map showing MENA countries (UNICEF, 2012)

Seventeen of the MENA countries have been classified by the World Bank as developing countries based on their level of industrialisation and a low-to-middle standard of living. The remaining five MENA countries (Bahrain, Saudi Arabia, Oman, Qatar and UAE) are considered emerging market and developing economies, as they are affluent but lacking in infrastructure, according to the International Monetary Fund's (2015) World Economic Outlook Report.

### **2.2.2 The stigma and burden of mental disorders in the Arab world**

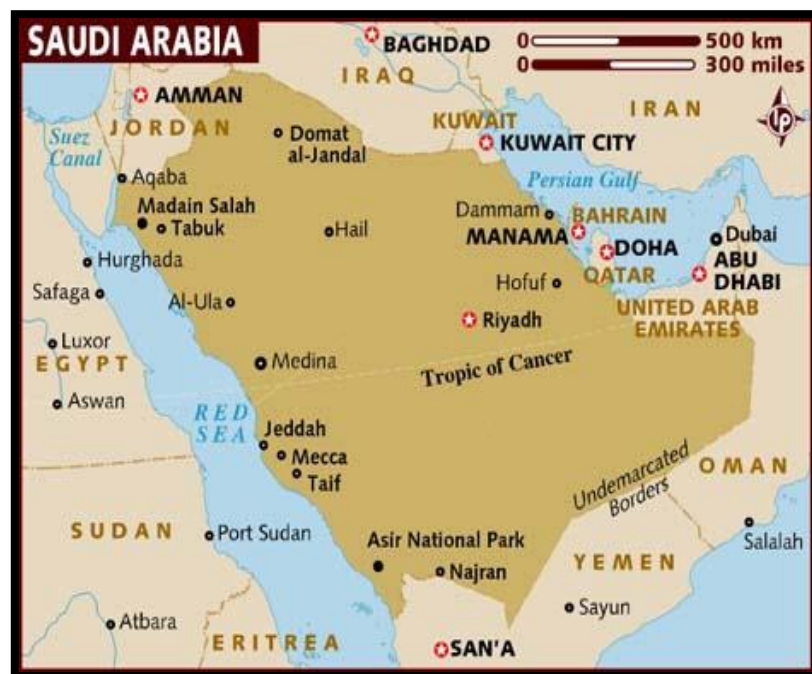
Mental disorders are stigmatised all over the Arab world, particularly in the developing countries within the MENA region (Bloom et al., 2011), where mental health research is still in its infancy and the burden of unmet mental health needs and mental disorders is exacerbated by the stigma and discrimination attached to them (El-Gilany et al., 2010). In these countries, many erroneously associate individuals who have mental disorders with danger, crime and hostility, rather than with the more harsh reality of vulnerability, exclusion and the denial of basic rights. The lack of mental health research, lack of knowledge of viable treatment options and lack of accessibility to mental health services have led many to believe that mental disorders are not curable and that seclusion and isolation (usually in long-stay hospitals) are the only choices. This has also led many Arabs with mental disorders to underutilise existing mental health services or not to seek them out at all, as they themselves may share the commonly held negative attitudes and beliefs regarding psychiatry and service providers in this field (Al-Krenawi, 2005).

The WHO Mental Health Atlas (2011) reports that resources worldwide to prevent and treat mental disorders are still lacking, a third of all the countries in the world having no budget dedicated to mental health services. The unmet needs of mental healthcare is thus a global problem, with the paucity of research, the high treatment gap and low or middle income in developing countries (such as those in the MENA region) making the situation even graver. Yasamy (2008) lists a number of additional limitations in the mental healthcare services of developing countries, which include low per capita income levels, which is associated with scarcity of resources, shortage of qualified mental healthcare staff, the lack of disability benefits and community mental health services, minimal or no public budget dedicated to mental health insurance, low 'service utilisation', most likely as a result of stigma and erroneous beliefs surrounding mental illness, and discrimination due to poor community awareness.

### **2.2.3 Background and social structure of Saudi Arabia**

Saudi Arabia is one of the largest and richest countries in the Middle East (Figure 2.1). The total population is estimated to be 30,770,375, of whom 67.2% are Saudi nationals and 32.8% expatriates (Central Department of Statistics and Information, 2015). Saudi Arabia is made up of 13 provinces, namely Riyadh, Mecca, Medina, Qasim, Dammam, Asir, Tabuk, Hail, Ar'ar, Najran, Baha and Jouf. The main language spoken in all the

provinces is Arabic and the official religion is Islam, which has a dominant influence on the way the country and its people function. Although Riyadh is the capital city of Saudi Arabia and Jeddah is its biggest port, Medina and more so Mecca are the most notable cities, as they are home to the two holy mosques that millions of Muslims from all around the world visit during the annual pilgrimage known as the Hajj (one of the five pillars of Islam). Saudi Arabia is a monarchy and its law and criminal and civil legislative systems are based on the Shariah, Islamic law, which is informed by two main sources, the holy Quran (Islam's holy book) and the prophetic traditions referred to as the Sunnah. The country is run on a provincial council system, with a national consultative council, the Majlis Al-Shura, and a council of ministers (Saudi Embassy, 2015).



**Figure 2.2** Saudi Arabia map (Wikia travel, 2014)

Saudi Arabia has a rich heritage, tradition and culture. However, due to globalisation brought about by the proliferation of social media and intermixing through travel, the country is becoming more and more influenced by Western culture, resulting in a shift of attitudes and behaviours. This is especially the case with the younger generation, who tend to be in favour of modernisation. Young women in Saudi Arabia, for example, are becoming much more aware of the opportunities that can take them beyond their traditional role as homemakers and child-bearers; thus, more and more women are

postponing marriage until completion of university study. It is worth noting that this change has generated some conflict with cultural and religious principles.

#### **2.2.4 Saudi healthcare system**

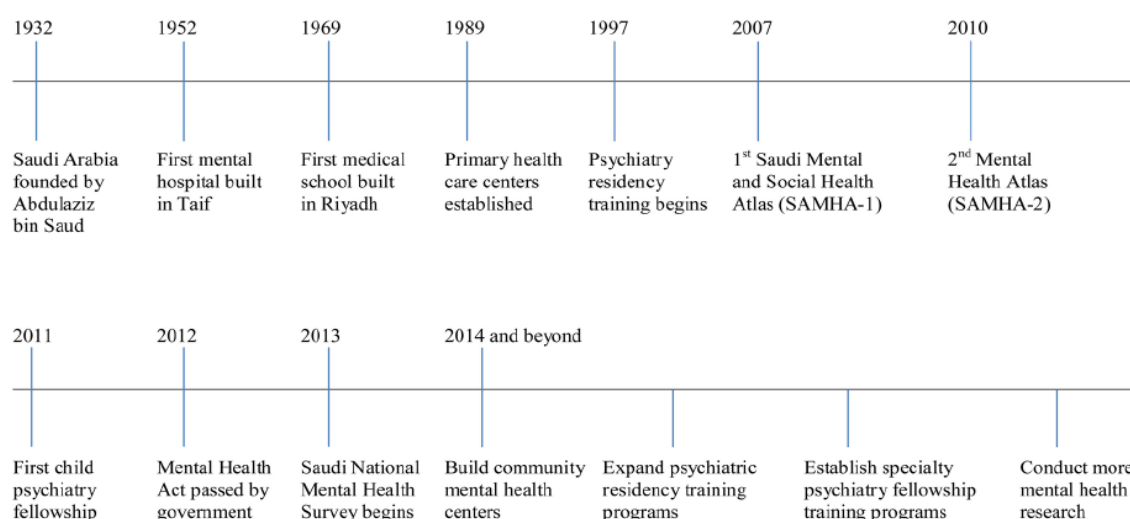
The World Health Report (2000) ranked Saudi Arabia's healthcare system 26<sup>th</sup> in a total of 190 health systems worldwide. However, more recent reviews have revealed that the system faces many challenges and deficiencies, in particular within the public health sector (Almalki et al., 2011; Al-Habeeb & Qureshi, 2010). These deficiencies include a healthcare workforce that relies heavily on expatriates. According to the Ministry of Health (MoH), only 38% of the total current number (248,000) of healthcare personnel in Saudi Arabia are Saudi nationals (Ministry of Health, 2009). An additional issue is the dominant role played by the MoH, which is responsible for the finance, control, supervision and operation of all public healthcare systems. This is a complex role, which some argue should ideally be subdivided and delegated to regional directorates to make the process more manageable (Al-Habeeb & Qureshi, 2010). Furthermore, because the funding for public healthcare services is provided directly by the government and all public healthcare services are free of charge to Saudi nationals, the MoH is constantly faced by the pressing responsibility of providing healthcare services to meet the demands of an ever-growing population. The following subsection reflects upon the compelling issues and challenges faced by Saudi Arabia's mental health system.

#### **2.2.5 The Saudi mental healthcare system**

Mental health hospitals did not exist in Saudi Arabia before the 1950s. People with severe mental disorders were deemed to be dangerous to the public and were often incarcerated as prisoners in public buildings in the holy city of Mecca. However, in 1952, the need for official mental health services was acknowledged and the first psychiatric hospital, commonly known as Shehar Psychiatric Hospital, was opened in the city of Taif, about 130 kilometres from Jeddah. Shehar was originally designed to be a 250-bed facility; however, the number of cases being admitted and treated at any one time has been reported to exceed the intended capacity. In 1978, for instance, the number of patients admitted reached 1,800, evidently reflecting a mismatch between supply and demand (Al-Habeeb & Qureshi, 2010). Moreover, having only one psychiatric hospital serving the whole country often meant that mental health services were inaccessible to those who could not travel long distances. The increase in the numbers of patients being admitted to

Shehar in the 1980s led the MoH to expand the facility to reach its current capacity of 690 beds and to open a number of other smaller (120-bed) psychiatric hospitals around the country. According to a recent press statement by the Saudi Ministry of Health (2015) there are now 23 psychiatric hospitals with a total capacity of 3,000 beds. Although this shows a significant improvement, the challenges of overcrowding faced by the mental healthcare system in Saudi Arabia are far from resolved.

The current bed ratio in Saudi Arabia, taking the population to be approximately 30 million, is 1.25 per 10,000. This is expected to increase to 1.6 over the next four years (Al-Habeeb & Qureshi, 2010). Other issues reported by these authors include a lack of psychiatric clinics and wards in general hospitals, too few psychiatrists, specialised mental health nurses and clinical psychologists, and an absence of community mental health services such as partial-way residential houses or day-care rehabilitation centres for patients with chronic mental health problems. Two of the most important challenges identified by the authors are: the need for a fixed separate budget assigned to the general administration of mental health social services; and the integration of mental healthcare services into primary healthcare or the development of a link between community primary healthcare and hospital psychiatric services. Figure 2.3 shows a timeline of mental health facilities in Saudi Arabia.



**Figure 2.3** Past, present and future of mental health system in Saudi Arabia (Koenig et al., 2014)

### **2.3 Aim, scope and methods of the review**

The review reported in this chapter was conducted to explore what is known about the portrayal of mental disorder in the Saudi media. This was important within the present study because media portrayal of mental illnesses are likely to influence the views of the student nurses in the present study about people with mental disorders.

The review reported below drew upon methods proposed by O'Malley and Arksey (2005) for a scoping review who define a scoping review as a way to “map rapidly the key concepts underpinning a research area and the main sources and types of evidence available” (p. 21). They note that such reviews are usually conducted to explore the range of research available, determine the feasibility of a systematic review, summarise and distribute findings, and identify gaps in evidence-based literature. The present review adopts their five-stage framework for conducting scoping reviews. The five stages are (Arksey and O'Malley, 2005, p.22):

1. Identifying the research question
2. Identifying relevant studies
3. Study selection
4. Charting the data
5. Collating, summarising and reporting the results.

There was considerable overlap between stages 1-3 as applied here to the two sources (newspaper and journal articles); therefore, this section deals with them concurrently. Because of differences in the content of the two data sources, the remaining two stages are reported separately, stage 4 in Sections 2.7 and stage 5 in 2.8 respectively. The first three stages, as applied to this study, are discussed below.

### **2.4 Stage 1: Identifying the research question**

The purpose of this review was to identify those aspects of stigma that exist because of cultural influences. The scope of this review is mental disorder-related stigma including, but not limited to, cultural influences and media portrayal, attitudes, behaviour and knowledge among Saudi people with regard to causes, treatment and recovery of mental disorders. The overall aim of this review was to identify what mental disorder-related



stigmas Saudi nursing students are likely to exhibit through an exploration of how mental illness is presented in Saudi culture. The data sources were newspapers; to describe popular representations of mental disorders, and academic journal; to describe empirical explorations of cultural factors.

The two research questions developed in relation to this aim were:

1. How are mental disorders portrayed in popular Saudi media, specifically newspapers?
2. How are mental disorders in Saudi populations presented in journal articles?

## **2.5 Stage 2 and 2.6 Stage 3: Identifying and selecting relevant studies**

A comprehensive review and search strategy was developed to identify data from newspaper and journal articles pertaining to mental disorders, culture and stigma in Saudi Arabia. Research has long suggested that the mass media play a crucial role in the framing of public knowledge, attitudes and behaviour related to controversial topics (McCombs, 2000). It is therefore important to explore the nature of the news on mental disorders reported by vehicles such as newspapers. Newspaper sources were selected for review over other forms of mass media because in Saudi Arabia newspapers continue to prevail against other mass media platforms (Dubai Press Club, 2010).

In their methodological framework, Arksey and O'Malley (2002) present a detailed summary of sources that can be included in a scoping review, identified by hand-searching archives and by accessing existing networks and related organisations. Time and resource restrictions prevented a thorough exploration of this area of the literature, which was thus limited to electronic resources. The four elements to be considered when identifying relevant studies, according to Arksey and O'Malley (2002) are: the different sources, the selection of languages, the timeframe of the search and the use of electronic sources, including a selection of databases and key search terms. The following subsections show how these guidelines were applied in this study to the newspaper articles and the journal articles.

## Search strategy: Newspapers

### *Source and language*

There are fifteen daily newspapers printed in Saudi Arabia (Saudi Press Agency, 2013), two of which (*Saudi Gazette* and *Arab News*) are published in English and the remainder in Arabic. The reported circulation numbers of Saudi newspapers vary considerably, depending on the source of the data, due to the absence of an independent audit bureau in the country. Apart from one newspaper (*Al-Jazirah*), which was audited in 2008 by the Business of Performing Audits (BPA), all other Saudi newspaper circulation numbers are based on estimates (Dubai Press Club, 2010).

Two out of the fifteen newspapers were excluded: *Al-Eqtisadia* because it specialises in economics and *Al-Sharq Al-Awsat* because it has a Pan-Arab rather than a Saudi focus. Four of the remaining thirteen—two in English and two in Arabic—were selected for the purpose of this review (Table 2.1). The choice of the two Arabic newspapers was based on the most recent Arab media outlook report conducted in the years 2009-2013. The report identified *Okaz* as the most popular newspaper among the Saudis, with the highest readership in print, while *Al-Jazirah* was the most popular newspaper for online news, with the highest reported online readership (Dubai Press Club, 2010). It is worth noting that *Al-Jazirah* is a separate entity from the satellite broadcasting news company which shares its name.

The English newspapers (*Saudi Gazette* and *Arab News*) were selected for three reasons. First, the nursing programme in Saudi Arabia is taught in English, so nursing students are bilingual and likely to access English data sources. Second, it is likely that among those following the nursing programme will be foreign students who would access these papers. Finally, the search was unable to identify another review of Saudi English newspaper media despite the fact that a significant proportion of the Saudi population comprises expatriates (particularly in the field of mental healthcare, as discussed earlier in this chapter). It is worth noting that an unpublished MSc. Dissertation (Felemban, 2008) comparing the portrayal of mental illness in Saudi Arabian newspapers with that outside the Middle East was retrieved however, it did not make reference to the English Saudi newspapers. Therefore, the inclusion of English newspapers provides a more comprehensive review.

**Table 2.1** Selected newspaper publications

<b>Name of paper</b>	<b>Language</b>	<b>Daily circulation</b>	<b>City of publication</b>	<b>Website</b>
<i>Arab news</i>	English	51,481	Jeddah	<a href="http://www.arabnews.com">http://www.arabnews.com</a>
<i>Al-Jazirah</i>	Arabic	123,097	Riyadh	<a href="http://www.al-jazirah.com">http://www.al-jazirah.com</a>
<i>Okaz</i>	Arabic	250,000	Jeddah	<a href="http://www.okaz.com.sa">http://www.okaz.com.sa</a>
<i>Saudi Gazette</i>	English	50,000	Jeddah	<a href="http://www.saudigazette.com.sa">http://www.saudigazette.com.sa</a>

### ***Timeframe***

The online archives of the four Saudi newspapers listed in Table 2.1 were searched. A timeframe of one year (2012-13) was selected, as it was deemed that any news features appearing during this period were those most likely to have influenced the nursing students participating in this study. The archives were basic and prevented the application of an advanced search strategy. For example, it was possible to limit the search to the year 2013 in only one of the selected newspapers (*Al-Jazirah*). The remaining three archives were searched without limit of time and the researcher then had to go through the articles manually to retrieve those that were published during the relevant year. The newspaper editors were asked for assistance with this task by email, but no response was received.

### ***Search terms***

The English and Arabic terms used to search the online archives, listed in Table 2.2, were selected as being common terms used by the public and healthcare professionals to refer to mental disorders. The main search terms were ‘mental’ and ‘\*psych’, which retrieved articles including, but not limited to, mental disorders, mental health, mental illness, psychological and psychiatric disorders. Common mental disorders, such as schizophrenia, depression, obsessive-compulsive disorder (OCD) and suicide, were searched for by name. Other terms sometimes used by members of the public when referring to people with mental disorders, such as ‘crazy’, ‘mad’ and ‘lunatic’, were also included. For the purpose of this review, in common with the whole study (as discussed in Chapter 1), articles relating to neurodevelopmental and neurocognitive disorders such as autism and Tourette’s were excluded. Articles on suicide with a political implication, such as suicide bombings, were also excluded.

**Table 2.2** Arabic and English search terms used

Arabic term	English term
اضطراب عقلي	Mental disorder
اضطراب نفسي	Psychological disorder
مرض عقلي	Mental illness
صحة نفسية	Mental health
مريض عقلي	Mental patient
مريض نفسي	Psychological patient
انتحار	Suicide
مجنون / جنون / مخبول / معتوة	Crazy/craziness/mad/lunatic
الإدمان على المخدرات	Drug addiction
اضطراب وجداني	Bipolar disorder
اضطرابات القلق	Anxiety disorder
القهري الوسواس	Obsessive compulsive disorder
اكتئاب	Depression
الفصام	Schizophrenia

As mentioned earlier, the search engines of each of online archives were relatively basic; in particular, none of them offered advanced search options such as Boolean search strings (limited by the operators AND, OR, NOT, etc); therefore, variants of the key terms had to be searched for separately and duplicate articles subsequently removed.

### *Eligibility criteria*

Table 2.3 presents a summary of the eligibility criteria discussed in Section 2.3

**Table 2.3** Newspaper and newspaper article selection criteria

Inclusion	Exclusion
English and Arabic language	
Published within the year 2013	
Articles about mental disorders	Articles about neurodevelopmental disorders or neurocognitive disorders
Presence of searchable online archives	Any article that was irretrievable due to website restrictions
Focus of the newspaper is Saudi Arabia	Pan Arabian newspapers that include Saudi Arabia
Includes an array of content, e.g. news reports, lifestyle, sports etc...)	Only specialised content, e.g. Sports newspaper or Economics newspaper)
Articles related to mental disorders and suicide	Articles about suicides with political associations (e.g. suicide bombings)

### **Search strategy: Journal articles**

Stigma is a complex concept and the intended intervention will seek to encapsulate and address key elements within this concept. This review, as previously stated, provides insight into those unique cultural influences on mental disorder-related stigma in the Saudi population in order to develop a suitable response. The review now turns from newspaper to empirical journal articles.

### ***Source, language and timeframe***

Searches were conducted using the search strategy set out in Table 2.4 on the following three electronic databases:

- *Ovid Medline*, from 1946 to October Week 5, 2014
- *Embase*, from 1980 to 2014 Week 45
- *PsychInfo*, from 1806 to November Week 1, 2014

Search limits on each database included limiting the search to articles in English and Arabic. The timeframe was unlimited: the searches dated back to the earliest available articles. In addition to these three databases, a search was conducted in journals relating specifically to the topic and geographical area, including:

- *Arab Journal of Psychiatry (AJP)*
- *Saudi Medical Journal (SMJ)*
- *Eastern Mediterranean Health Journal (EMHJ)*

Finally, article reference lists were searched.

## Search terms

The search strategy used for the electronic databases is listed in Table 2.4. The key terms were ‘mental’ and ‘Saudi’ with derivatives of each applied using the Boolean operators ‘OR’ and ‘AND’

**Table 2.4** Search strategy used on electronic databases to locate relevant studies

Category 1: Mental		Category 2: Saudi Arabia
Mental disorder OR Mental illness OR Chronic mental illness OR Mental health OR Mental healing OR Mental disease OR Mental patient OR Mental healthcare OR Psychiat* OR Psychological disorder OR Psychopathology OR Schizophrenia OR Depression OR Bipolar disorder OR Anxiety disorder OR Obsessive compulsive disorder OR Alcoholism OR Post traumatic stress disorder OR Psychosis OR Suicide OR Mental illness (attitudes towards)	Combined with Boolean operator <b>AND</b>	Saudi OR Saudi Arabia

\* Indicates a search including all possible variations of the term

### ***Eligibility criteria***

Table 2.5 below presents a summary of the selection criteria discussed in Section 2.3.

**Table 2.5** Journal article selection criteria

<b>Inclusion</b>	<b>Exclusion</b>
English and Arabic language	
Up to November 2014	
Articles about mental disorders	Articles about neurodevelopmental disorders or neurocognitive disorders
Presence of searchable online archives	Any article that was non-retrievable
Focus of the journal article is Saudi population	Pan Arabian journal articles
Articles related to mental disorders and suicide	Articles about suicides with political associations (e.g. suicide bombings)
Published studies: peer-reviewed journal articles, editorials	Unpublished literature
	Any article that was non-retrievable by university library services

## **2.7 Stage 4: Charting the data**

### **Newspaper articles**

#### ***Data extraction and tabulation***

The 200 newspaper articles selected were tabulated using Excel software. The descriptive characteristic data and article content variables (Table 2.6) and the main classifying themes (Table 2.7) were coded, then extracted as described by Wahl et al. (2002) and Corrigan et al. (2005b), as discussed below.

#### ***Descriptive characteristic data and article content variables***

The descriptive characteristic data extracted were: the name of the newspaper, the article word count and the section of the newspaper that the article appeared in. As per the model described by Wahl et al. (2002), six article content variables were extracted, details of which are shown in Table 2.6 below. The variables were: the name of the newspaper, the article word count, the section of the newspaper that the article appeared in, the type of mental disorder under discussion, whose opinions on mental disorders were quoted and finally, the impact of the article on stigma. ‘Impact’ was classified into four categories:

- *Positive*: showing people with mental disorders in a positive light; for example, their ability to fully recover and be productive members of society
- *Neutral*: where the tone is impartial, neither positive nor negative
- *Negative*: associating people who have mental disorders with violence and crime or seeing them as incompetent
- *Mixed*: containing both negative and positive elements.

**Table 2.6** Descriptive characteristic data and article content variables

<b>Descriptive data</b>	<b>Name of the newspaper</b> (letters in brackets indicate the allocated code)	<i>Saudi Gazette (SG), Arab News (AN), Al-Jazirah (AJ), Okaz (O)</i>
	<b>Article word count</b>	
	<b>Section of the paper</b> (letter in brackets indicates the allocated code)	Front (a)
		Local, regional news (b)
		Lifestyle (c)
		Editorial, opinion (d)
		Entertainment (e)
		Business (f)
		Health (g)
		Sports (h)
		World (i)
<b>Article content variables</b>	<b>Type of Mental disorder</b> (number in brackets indicates the allocated code)	General (0)
		Specific—listed below (1)
		Depression (2)
		Suicide (3)
		Attempted suicide (4)
		Suicide + murder (5)
		Schizophrenia (6)
		OCD (7)
		Bipolar disorder (8)
		Addiction (9)
		Anxiety disorders (10)
		Personality disorder (11)
		PTSD (12)
		Other (13)
	<b>Opinions</b> on mental disorder (not quoted or quoted) .	Not quoted (Q0)
		Quoted by patient (Q1)
		Quoted by healthcare professional (Q2)
		Quoted by other (Q3)
	<b>Impact</b> on stigma	Negative
		Neutral
		Positive
		Mixed



### *Main classifying themes*

The coding schema used in this review mirrors that used by Wahl and colleagues et al. (2002) and Corrigan et al. (2005b). In a paper exploring the changing nature of newspaper coverage of mental illness, Wahl et al. (2002) identify three factors to capture these data: specific named disorders, the main theme of each article and the overall tone of the article. The two main themes were treatment and recovery, and advocacy actions and concerns. Corrigan et al. (2005b) developed these themes in their exploration of newspaper stories as a measure of structural stigma, adding the themes of blame and dangerousness. In the present review a deductive approach was taken based on this existing knowledge. The same four main themes identified by Corrigan and colleagues: blame, dangerousness, treatment and recovery, and advocacy actions and concerns were also found within the present review. However, sub-themes also emerged that included culturally specific variables related to the study population. These are described in detail below.

The decision of Wahl and colleagues (2002) to take treatment and recovery, and advocacy actions and concerns as their main themes was based on the hypothesis that the way articles consider treatment options is likely to influence readers' perspectives on people with mental disorders. For example, the influence of an article discussing a number of bio-psycho-social treatment options would be expected to differ from that of an article focusing on purely biological treatments, or one addressing the treatment process without mentioning recovery prospects.

Corrigan and colleagues (2005b) added the theme of blame on the grounds that attributing to people the direct responsibility for their own mental disorders is likely to induce negative feelings of anger and resentment towards them. Conversely, when people with mental disorders are not blamed but are portrayed as not being responsible for their disorders, this is more likely to evoke in others the positive feelings of sympathy and support for them (Corrigan et al., 2005b). As to the theme of dangerousness, seeing people with mental disorders as being potentially aggressive and threatening is likely to instil fear and avoidance of them in others.

Finally, it is suggested that the broad theme of advocacy actions and concerns may also affect how mental disorders are represented, such as when articles discuss the lack of services and address advocacy actions to enhance opportunities for people with mental disorders (Wahl et al., 2002).

### ***Sub-themes***

Table 2.7 shows the full coding schema, including the sub-themes, the majority of which reflected those found by Corrigan and colleagues (2005) discussed above. Four other sub-themes, which emerged during this review, are presented below as they relate to the existing sub-themes under the four main themes. A key part of the data extraction process followed by Wahl and colleagues (2002) involved the clarification of their sub-themes using summary statements. The following paragraphs provide examples of the meanings of the sub-themes used in the present study. Section 2.5 populates Table 2.7 and presents the final results of this review.

**Table 2.7** Classification of themes

<b>Main themes</b>	<b>Sub-themes (and codes)</b>
<b>Blame</b>	Personal blame (1)
	Parental failure/family neglect (2)
	Genetic/biological cause (3)
	Environmental or societal cause (4)
	Spiritual/supernatural cause (5)
<b>Dangerousness</b>	Danger to others (1)
	Violent crime (2)
	Nonviolent crime (3)
	Suicidal or self-injurious behaviour (4)
	Mental disorder as a legal defence (5)
	Legal competence (6)
	Criminal victimisation (7)
	Drug and alcohol abuse (8)
<b>Treatment and recovery</b>	Research advances (1)
	Biological/medicinal treatments (2)
	Psychosocial treatments (3)
	Traditional/ spiritual/ alternative treatments (4)
	Recovery as an outcome (5)
	Development/ organisation of services (6)
<b>Advocacy actions and concerns</b>	Poor-quality treatment (1)
	Shortage of resources (2)
	Homelessness (3)
	Housing issues (4)
	Public awareness and education (5)

The first theme, blame, contained four sub-themes also identified by Corrigan et al. (2005b), with a fifth, ‘spiritual/supernatural cause’, added during the review process. The pre-existing sub-themes were: *personal blame*, where people with mental disorders are held accountable for their disorder, e.g. drug addicts have no one to blame but themselves for their disorders; *parental failure*, whereby poor parental upbringing is considered to

cause the development of mental disorders; *genetic or biological causes*, e.g. mental disorders are inherited; and *environmental or societal causes*, e.g. psychological problems are typically the result of interactions with the environment. The additional sub-theme of *spiritual/supernatural causes* refers to mental disorders being seen as the result of supernatural forces, black magic or possession, e.g. mental disorders are caused by the evil eye.

The second theme was dangerousness, containing the following eight sub-themes: *danger to others*, e.g. people with mental disorders are likely to be dangerous; *violent crime*, e.g. people with mental disorders are unpredictable and can pose a physical threat to others; *non-violent crime*, e.g. people with mental disorders tend to be involved in petty crime such as public indecency, theft or larceny, suicidal or self-injurious behaviour; *mental disorder as a legal defence*, whereby the person with a mental disorder argues they should not be held liable for the crime because they were mentally ill at the time; *legal competence* with regard to the individual's mental capacity, for example to make their own decisions about treatment and care; *criminal victimisation*, when a person with mental disorder is falsely criminalised due to their condition; and finally, *drug and alcohol abuse*.

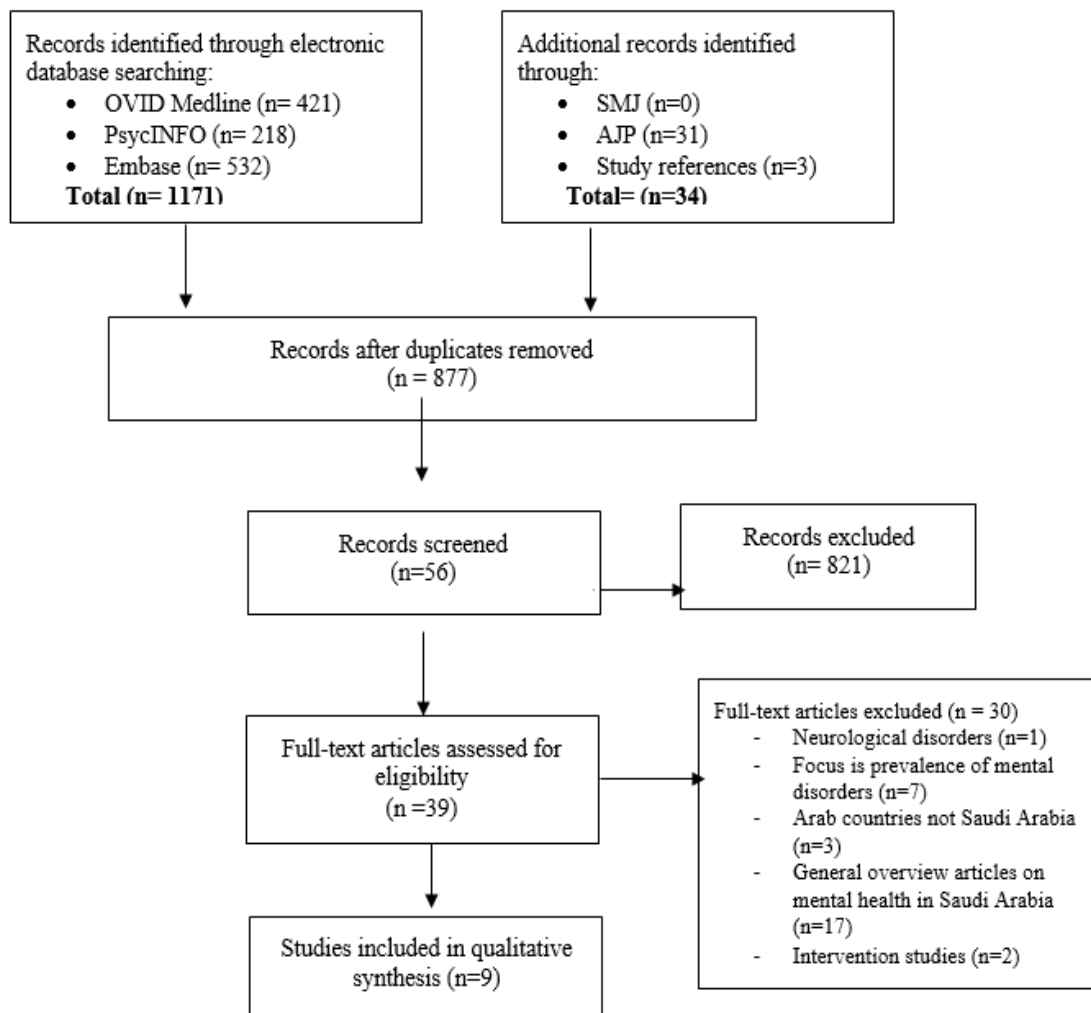
The main theme of treatment and recovery contained the following six sub-themes, the last two being added during the review process: *research advances*, e.g. new developments in treatment modalities; *biological/medicinal treatments*; *psychosocial treatments*, e.g. psychotherapy; *recovery as an outcome*, e.g. mental disorders being successfully treated; *development/organisation of services*, e.g. opening of new mental health hospitals; and *traditional/spiritual/alternative treatments*, e.g. *rukya* (recitations of Quranic verses for treatment purposes) or seeking treatment from a sheikh (a respected pious man).

The final main theme of advocacy actions and concerns contained six sub-themes, the last of which was added during the research process: *poor-quality treatment*, e.g. patients with mental disorders being neglected by staff; *shortage of resources*, e.g. shortage of mental health hospital beds; *homelessness; housing issues*, e.g. families leaving recovered patients with mental disorders at the hospital and refusing to accept them; and *public awareness and education*. This final sub-theme concerns the need to educate the public about mental disorders and correct commonly held misconceptions via awareness

campaigns, educational courses and pro-mental health messages via social media, for example. One of the original five sub-themes, *insurance parity*, was removed, as the search yielded no results.

### Journal articles

In total, 1,205 articles were retrieved during the database search, as detailed in Figure 2.4. After filtering for duplicates and screening by title, 56 articles remained. Of these, 39 were identified as potentially relevant and their full text was reviewed. Following further screening, nine articles were selected as relevant to the scope of this review. These comprised a narrative review, a qualitative thematic exploratory study, two cross-sectional surveys and five questionnaire surveys.



**Figure 2.4** Journal article selection process

## **2.8 Stage 5: Collating, summarising and reporting results**

Arksey and O'Malley (2005) provide detailed guidance for methods of collating, summarising and reporting on the findings of a scoping review. This review followed their pattern of charting the literature (Tables 2.8 and 2.9). The authors suggest two methods of presenting the findings. The first is a numerical analysis that includes mapping and charting findings while scrutinising the various interventions identified; the second method involves organising the literature thematically. This second approach was applied to this review because the salient feature was the content not an analysis of the quality or implications of the data sources (Arksey & O'Malley, 2005). The method was adapted here to allow for a numerical and themed analysis. This thesis is concerned with mental disorder-related stigma arising from ways of viewing people and conditions that arise from the language, frequency and emphasis of stigmatising themes. The final stage of understanding and reporting the data adapted from Arksey & O'Malley (2005) drew this review to its conclusion by providing a means to answer the research questions set at the beginning of this review:

1. How are mental disorders portrayed in popular Saudi media, specifically newspapers?
2. How are mental disorders in Saudi populations presented in journal articles?

In the following sections the findings from this review are presented. First the newspaper articles are explored and then the academic journals, before a summary comparison presents the implications of this review for the present study.

### **Newspaper review findings**

#### ***Descriptive article content***

Using the search terms identified in Stages 1 to 3, a total of approximately 1,243 newspaper articles were retrieved from the four online newspaper sources. Data saturation was achieved when no new themes or sub-themes emerged. This was found to be at approximately 30-50 articles from each source. Therefore, the first 50 articles from each of the four online archives were selected to produce a total sample of 200 newspaper articles.

Most of the articles appeared in the local/regional section of the newspaper (n=156) and in the opinion or editorial sections (n=23). The mean length for all four newspapers was 430 words per article, the shortest comprising 32 words and the longest 3,461 words. Articles differed in how they reported mental disorders. Most (n=109) referred to mental disorders in general, using terms such as ‘mental illness’, ‘psychiatric problems’, ‘mental health’ and ‘mental problems’. In those which mentioned specific disorders (n=91), it was found that depression (n=34), addiction and drug abuse (n=31) and schizophrenia (n=17) were the most commonly reported, whereas posttraumatic stress disorder (PTSD) (n=1), bipolar (n=3) and personality disorders (n=3) were the least reported. The sum of the articles per newspaper listed in Table 2.8 is not always 50, because some articles fitted more than one category. Thus, for example, a total of 91 articles mentioned specific disorders, but because some made reference to more than one specific mental disorder, the sum of those listed as mentioning specific disorders is 126.

Articles reporting on suicide (both attempted and completed) in relation to mental disorders were also relatively common (n=20). Not all of the articles included quoted opinions about mental disorders (n=89). Of those which did include quotes on mental disorders (n=111), only 26 provided opinions from people who had experienced a mental disorder, while the majority provided opinions offered by healthcare professionals (n=85) and others (n=26). With respect to the impact that the articles had on mental disorder-related stigma, about half were considered positive, except for one of the newspapers (SG), which contained more negative articles. About a quarter of the articles were negative across all four papers. The number of articles considered to be mixed or of neutral impact was relatively low. Table 2.8 details the descriptive findings on the content of the newspaper articles reviewed.

**Table 2.8** Newspaper article content

	Category	AJ (n=50)	O (n=50)	AN (n=50)	SG (n=50)	Total (N=200)
<b>Section of the paper</b>	Front	1	2	0	5	8
	Local, regional news	35	42	42	37	156
	Lifestyle	0	0	2	0	2
	Editorial, opinion	11	6	1	5	23
	Entertainment	1	0	0	0	1
	Business	0	0	0	1	1
	Health	1	0	0	2	1
	Sports	1	0	0	0	1
	World	0	0	5	0	5
<b>Article word length</b>	Mean word length	363	440	464	453	N/A
	Longest word length	3,461	1945	973	1004	N/A
	Shortest word length	46	82	189	32	N/A
<b>Type of mental disorder (MD)</b>	Non-specific/general	30	33	20	26	109
	Specific (listed below)	20	17	30	24	91
	Depression	4	9	12	9	34
	Suicide (completed)	0	5	4	3	12
	Suicide (attempted)	0	3	2	3	8
	Schizophrenia	4	3	4	6	17
	Bipolar	1	0	2	0	3
	Personality disorder	0	0	1	2	3
	OCD	2	1	0	1	4
	PTSD	0	0	1	0	1
	Addiction & drug abuse	10	5	10	6	31
	Anxiety disorder	2	2	3	2	9
	Other	0	0	2	2	4
<b>Opinion on MD</b>	Not quoted	29	23	14	23	89
	Quoted by patient	2	4	4	1	11
	Quoted by healthcare professional	16	19	28	22	85
	Quoted by other	3	12	6	5	26
<b>Impact on stigma</b>	Positive/negative/mixed/neutral	27/8/7/8	26/9/12/3	28/9/8/5	18/22/8/2	99/48/35/18

***Main themes and sub-themes***

This review generated a wealth of data across the themes and sub-themes. To provide a typical portrayal of mental disorders in Saudi Arabia, Table 2.9 lists the number of newspaper articles by theme, then the following paragraphs present each theme and significant material from the sub-themes with supporting examples from the data.

**Table 2.9** Number of newspaper articles by theme

General theme	Sub-theme	AJ (n=50)	O (n=50)	AN (n=50)	SG (n=50)	Total (N=200)
<b>Advocacy actions and concerns</b>	Poor-quality treatment	4	10	2	2	18
	Shortage of resources	12	11	5	7	35
	Homelessness	1	7	1	6	15
	Housing issues	1	11	3	8	23
	Public awareness and education	23	25	27	19	93
<b>Treatment and recovery</b>	Research advances	9	5	7	6	37
	Biological/medicinal treatments	5	9	10	13	37
	Psychosocial treatments	11	8	10	7	36
	Traditional/ spiritual/ alternative treatments	3	5	6	5	19
	Recovery as an outcome	17	13	3	7	40
	Development/ organisation of services	21	21	14	10	66
<b>Dangerousness</b>	Danger to others	4	11	7	16	38
	Violent crime	5	3	5	12	25
	Nonviolent crime	2	5	2	4	13
	Suicidal or self-injurious behaviour	1	9	4	6	20
	Mental disorder as a legal defence	2	3	5	1	11
	Legal competence	1	1	0	2	4
	Criminal victimisation	3	1	1	0	5
	Drug and/or alcohol abuse	0	1	2	3	6
<b>Blame</b>	Personal blame	1	0	0	1	2
	Parental failure/family neglect	1	3	2	5	9
	Genetic/biological cause	3	4	6	4	17
	Environmental or societal cause	6	6	10	8	30
	Spiritual/supernatural cause	1	2	2	3	8

*Theme: Advocacy actions and concerns*

Articles that had advocacy actions and concerns as a main theme (59.5%, n=120) were predominately positive in tone and attitude towards people with mental disorders. The largest sub-theme under this category was public awareness and education, which was the highest across all four newspapers (n=94). The article content reported on a range of contexts, for example public awareness campaigns and mental health statistics and facts. These articles had the shared goal of educating the Saudi community on issues relating to mental disorders such as dispelling myths and advocating for the rights of those with mental disorders. A quote typifying this theme was taken from an article entitled ‘Facing mental illness by breaking the shame and activating awareness’ (translated by the researcher), which provided the viewpoints of several mental health professionals all in agreement on the need for increased public awareness regarding mental disorders:



Psychiatrists and mental health specialists called for mental illnesses to be given more prominence in public awareness programmes in light of the increase in abnormal mental disorders that require pharmacological interventions such as depression, anxiety disorder and sleep disorders, noting that the lack of awareness regarding mental illness and the shame associated with the diagnosis of these diseases form the most important obstacles leading to misdiagnosis and depriving patients of access to appropriate treatment. (Dawoud, 20/04/2013)

Other sub-themes related to advocacy actions and concerns included shortage of resources (n=35), housing issues (n=23), poor quality treatment (n=18) and homelessness (n=15). The sub-theme of shortage of resources was commonly related to shortage of services and service providers, including mental health hospitals, rehabilitative services, insufficient hospital beds and qualified mental health staff. Poor quality treatment reflected references to patients' rights, including unfair treatment, neglect and abuse. In regard to housing issues and homelessness, commonly reported issues included families refusing to receive discharged and recovered patients from mental health hospitals, and lack of halfway houses and day care centres, as illustrated by the following extract:

Al-Amal Hospital for Mental Health is home to many female patients suffering from different mental ailments, such as schizophrenia, depression, paranoia and others. These women were living normal lives with their families, but fell prey to mental illnesses and required treatment. Some of these women have recovered, but their families are refusing to accept them back into their homes. Such women have no other alternative but to remain in the hospital, which in turn affects their mental status and may cause a relapse of their conditions. In addition, such a situation puts great pressure on the hospital, which has only 74 beds and a large waiting list. (*Saudi Gazette*, 05/09/2013)

The article goes on to quote two social workers, who state that the recovery of patients with mental disorders relies on family support and acceptance, calling upon society to be more understanding of people with mental health conditions:

Mental patients are not insane, but they are individuals who have experienced difficult circumstances and are incapable of coping with them. They are in need of special care and, as part of society, they have the right to be rehabilitated and accepted... Many families admit their patients into the hospital, and neglect to visit them for long periods. Some patients are

completely rehabilitated and can leave the hospital and lead a normal life  
(*Saudi Gazette*, 05/09/2013).

*Theme: Treatment and recovery*

The second theme, treatment and recovery, also featured in a significantly large number of articles (approx. 55% of the total). The number of articles relating to the sub-theme of development/organisation of services was also high (n=40). Articles under this sub-theme commonly reported on new mental health service developments in Saudi, such as new mental health hospitals and the first national mental health survey. An example is an article entitled '100 experts research the rights of mentally ill patients' (translated by researcher), which comments on the launch of a new forum for mental healthcare officials:

Dr. Abdul-Hamid Habib, secretary-general of the National Commission for the care of mentally ill patients and their families, explained that the purposes of the forum are to define the rights of the mentally ill and the means and the scales used to defend them, and to ensure that mentally ill patients adequately receive their rights. He noted that the forum addresses hospital administrators, patient relation officials and the heads of nursing in mental health hospitals in the Kingdom, and hoped that the forum would produce recommendations that are in the best interest of mentally ill patients and their families. (Al-Bilahidi, 28/01/2013)

The sub-themes of research advances (n=37), biological/medicinal treatments (n=37) and psychosocial treatments (n=36) received equal attention. Articles related to these sub-themes discussed some of the latest advances in mental health research, as well as the different treatment modalities available for people with mental disorders, e.g. cognitive behavioural therapy as a form of psychosocial treatment for OCD. Traditional/spiritual/alternative medicine was also discussed as a treatment modality in several articles (n=19).

One article encompassed elements relating to all the sub-themes within treatment and recovery; it reported on the importance and components of a 19-hour continuing medical education course on addiction:

Dr. Riyadh bin Abdullah, Assistant Executive Director of the medical services complex and Chairman of the Scientific Committee of the Conference, explained that the conference includes 16 scientific papers in the fields of

addiction treatment, rehabilitation services, psychological and social guidance, and religious programmes in the field of recovery. It also comprises several workshops, where all aspects of addiction medicine and the roles of the therapeutic team in this specialty, including psychiatric specialists, social workers, psychologists, religious counsellors and recovery counsellors, will be discussed. (Al-Harthi, 02/02/2013) (translated by researcher)

The article acknowledges recent developments in mental health care in Saudi Arabia:

The treatment of addiction in Saudi Arabia has evolved and now encompasses all aspects of treatment in an integrated manner including psychological, behavioural, social and recovery guidance as well as religious guidance. (Al-Harthi, 02/02/2013)

*Theme: Dangerousness*

The third theme, dangerousness, accounted for 32.5 % of the articles. The majority of these focused on the sub-theme of danger to others (n=38), followed by violent crime (n=25) and suicidal or self-injurious behaviour (n=20). A smaller number of articles addressed the sub-themes of nonviolent crime (n=13), mental disorder as a legal defence (n=11) and criminal victimisation (n=5). A common misconception within articles on this theme was that people with mental disorders pose a greater threat to others than to themselves. Articles tended to portray people with mental disorders as violent, unpredictable and a danger to their community. This inaccurate belief is exemplified in the conclusion of an article entitled ‘Three divorced wives and the fourth one on the way’ (Al-Thubaiqi, 30/04/2013). It tells the story of a man with a string of three unsuccessful marriages as a direct result of his mental disorder. Having shared the testimonies of the three wives, who all suffered verbal and physical abuse at the hands of this man, the author concludes with the following controversial statement:

I hope the authorities blacklist this man and his like in the future so that families know what they are getting into. My advice to the authorities is to make psychological and drug tests obligatory for all prospective husbands. (Al-Thubaiqi, 30/04/2013)

Only four articles on legal competence were found in the newspapers reviewed. All were predominantly paternalistic in their attitude towards patients with mental disorders. Patients were not seen to be competent to make their own decisions in regard to their own

treatment. This is best exemplified in an article quoting a leading gynaecologist as asserting that, “mentally ill women should undergo a hysterectomy to guard them against sexual abuse” (*Saudi Gazette*, 12/04/2013). Even the moderating response of a fiqh professor, suggesting that, “such an action is prohibited in Islam because mentally-ill women may recover and get married” (*Saudi Gazette*, 12/04/2013) reflects this paternalistic attitude. While articles quoting professional opinions predominately advocate for medical control over the individual’s healthcare decisions, public opinion in the comments sections strongly refute such statements. This suggests a contrast between the views of the public and of professionals as to the legal rights of people with mental disorders:

Sexual abuse would in no way be deterred by performing hysterectomies on mentally ill patients. It would only prevent pregnancies. It is illogical. (Public comment in response to the article content above, *Saudi Gazette*, 12/04/2013)

#### *Theme: Blame*

The fourth theme, blame, was the least often alluded to (n=45), appearing in only 22.5% of the articles. The most commonly cited reasons for mental disorders were found to be environmental (n=30) and genetic/biological (n=17), followed by parental failure and family neglect (n=10), spiritual/supernatural causes (n=8) and lastly, personal blame (n=2). Despite the negative connotations of the theme, it was represented by several positive articles that advocated compassion and understanding for people with mental disorders, rather than attributing blame to the individual for their condition.

An emphasis on increasing one’s knowledge and by doing so changing one’s attitude was found in the following opinion piece that spans the sub-themes of personal blame and genetic/biological causes. The article, entitled ‘A wife but she is incomplete!’ (Al-Muhaymid, 06/07/2013) (translated by researcher), questions whether a mental illness such as genophobia (fear of sexual intercourse) can indeed occur in women. The author expresses his surprise at a television programme called ‘An Issue of Public Opinion’, which dedicated an episode to a discussion of genophobia. The show interviewed an individual with genophobia, a gynaecologist and a psychiatrist in an attempt to discover whether this was a mental or physical disorder, how common it was and what was being

done to treat it. The author discusses the attribution of blame in relation to mental disorders:

Such cases are usually handled lightly and often with mockery. The female patient is usually ridiculed and accused of being spoilt or overreacting when claiming a fear of intercourse. This is apparently not the case. It is likely that she is experiencing a mental disorder and needs professional care and treatment. Indeed, because of such ignorance, some women may be exposed to wrongful treatment by some physicians who believe it to be a physical disease rather than a mental one, thus further exacerbating their fear and anxiety symptoms. The taking of a woman's virginity through surgery as treatment, which is not a surgery sanctioned by the medical profession, is occurring increasingly in developing countries. This unfortunately only makes things worse and more complex, and doubles the fear, anxiety and pain experienced by these women. (translated by researcher) (Al-Muhaymid, 09/11/2013)

As stated earlier, the researcher included the sub-theme of spiritual/supernatural cause because this is an important element to consider within the Saudi context. This is a controversial topic in the country, with some parties blaming mental disorders purely on spiritual forces such as the evil eye, while others promote consideration of physical factors. One article demonstrating this mixed opinion stated:

Excessive fear of the evil eye and those who cast it is common among certain people. Such beliefs serve to benefit charlatans who prey on the minds of such victims. We see a certain class of society standing at the gates of these charlatans, driven by illusion, disillusion and fear of the evil eye and those who cast it – and the devil whispers to them, leading them to believe that their mental disorders are caused by the evil eye while they benefit from exploiting them. (Translated by researcher) (Al-Fuzan, 06/07/2013)

This article evoked criticism from some parties, suggesting that the author was undermining the Islamic faith. The author responded with the following balanced response:

Yes, the evil eye exists and I do not deny that, but I do refuse to connect every mental or physical disorder to the evil eye... and I do reject excessive intimidation and fear from the evil eye... and I do condemn the seeking of treatment from spiritual healers to be cured of the evil eye, because it has not been proven that the prophet Mohammed (PBUH) or his companions

ever took it upon themselves to perform *rukya* with the intention of treating others as a profession and a form of livelihood. Instead, they performed *rukya* on themselves and others using Quranic verses and prayers only and free of charge. This is what the Islamic sharia recommends to prevent patients from being exploited and robbed. (Translated by researcher) (Al-Fuzan, 06/07/2013)

This debate encapsulates some of the complexities involved in identifying causes or ‘blame’ for mental disorders and the inconsistency of treatment that people with mental disorders receive.

## Journal article findings

### *Descriptive article content*

In total, nine journal articles were reviewed. Their population samples were: three patient samples, two public samples and two healthcare samples. The concept of a population sample was not applicable to the remaining article (Islam and Campbell, 2014), because it was an exploratory thematic analysis of textual material (the holy Quran).

**Table 2.10** Number of empirical journal articles by theme

General theme	Sub-theme	Total
<b>Advocacy actions and concerns</b>	Public awareness and education	3
<b>Treatment and recovery</b>	Traditional/ spiritual/ alternative treatments	6
<b>Dangerousness</b>	Danger to others	1
<b>Blame</b>	Personal blame	1
	Spiritual/supernatural cause	4

### *Main themes and sub-themes*

#### *Theme: Advocacy actions and concerns*

Three articles (Al-Sughayir, 1996; Qureshi et al., 1998; El-Gilany et al., 2010) discuss the theme of advocacy actions and concerns in relation to the sub-theme of public awareness and education. El-Gilany et al. (2010) elicited 5<sup>th</sup>-year Saudi medical students’ views on psychiatry using a questionnaire distributed before and after the six-week psychiatry rotation and observed that before starting the rotation, 90.7% of the students

were uncomfortable with mentally ill patients, which fell to 66.9% following the rotation. These figures indicate a high degree of stigma towards mental disorders among medical students and suggest that they can be improved through education and exposure to such cases in hospitals.

*Theme: Treatment and recovery*

The main theme discussed in the journal articles was treatment and recovery. Six articles (Sayed et al., 1999; Al-Rowais et al., 2010; Qureshi et al., 1998; Al-Sughayir, 1996; Ciftci and Corrigan, 2013; Wahass and Kent, 1997) discussed elements in relation to the sub-theme of traditional/spiritual/alternative treatments. One article (Wahass and Kent, 1997) made a comparison between Saudi and British public attitudes towards causes and treatment of auditory hallucinations in relation to traditional/spiritual/alternative treatments versus the biological/medicinal and psychosocial treatments sub-themes respectively.

Wahass and Kent (1997) examined community attitudes in both Saudi Arabia and the United Kingdom towards auditory hallucinations. More specifically, they studied the perceived causes of auditory hallucinations, the effectiveness of interventions and the levels of social rejection. The researchers hypothesised that there would be cultural differences in the beliefs about the origins, treatment options and social attitudes towards auditory hallucinations; that beliefs about aetiology would affect the perceived efficacy of treatment options as well as the degree of social rejection; and finally, that educational levels would be related to the degree of social rejection but not to the explanation of the aetiology. To test these hypotheses, they collected questionnaire data from adult patients of three practices in the UK and six in Saudi Arabia. The results indicated that those living in Saudi Arabia were more likely to believe that hallucinations were caused by Satan or magic and that religious assistance would be the most effective treatment, while respondents' degree of social rejection was found to relate to their educational levels. In contrast, those living in the UK were more likely to attribute the hallucinations to schizophrenia or brain damage, to believe that medication and psychological therapies would be most effective and to have a relatively low degree of social rejection, unrelated to their educational levels. The researchers conclude that such beliefs about the aetiology of auditory hallucinations have an impact on both treatment recommendations and social rejection. Given the role of social acceptance in the prevention of relapses, these beliefs

have important implications for the care of Arabian patients in Western countries and for the successful use of Western intervention methods in non-Western cultures (Wahass and Kent, 1997).

#### *Theme: Dangerousness*

Only one article (Shahrour and Rehmani, 2009) discusses the theme of dangerousness in relation to the sub-theme of danger to others. Sharour and Rehmani's (2009) cross-sectional survey of 860 members of hospital staff who had direct contact with patients with mental disorders was carried out using an attributional questionnaire to measure the stigma associated with psychiatric illnesses, testing the connection between people's views about patients with mental disorders (concerning dangerousness and personal responsibility) and their discriminatory behaviour. The researchers found that participants scored highly in terms of a caring attitude towards patients with psychiatric illness (6.8/9), had medium scores for fear (4/9), avoidance (4.8/9) and dangerousness (4.3/9), and low scores for feelings of anger towards psychiatric patients (3.1/9). They also found that any discriminatory behaviour was as a result of the perceived dangerousness of psychiatric patients, not as a result of holding them responsible for their own condition. The researchers conclude that although there was a correlation between the perceived dangerousness of psychiatric patients and discriminatory behaviour, overall the hospital staff did not consider that the patients were to blame for their illness and they had a caring attitude towards them.

#### *Theme: Blame*

Five articles (Islam and Campbell, 2014; Ciftci and Corrigan, 2013; Wahass and Kent, 1997; Al-Sughayir, 1996; Shahrour and Rehmani, 2009) discussed the theme of blame. Four of these fell under the sub-theme of spiritual/supernatural causes and only one article (Shahrour and Rehmani, 2009) discussed the sub-theme of personal blame.

Islam and Campbell (2014) conducted a thematic analysis of four English translations and the Arabic texts of the holy Quran to determine whether there was a relationship between possession by *jinn* (demons) and insanity in the Muslim holy book, using an online search tool, Quran Explorer, to locate verses in the Quran which referred to jinn, Satan and madness-related terms. They found that there was no mention in the Quran that jinn were the cause of mental illness. Moreover, there was no direct relationship between Satan and insanity mentioned in the Quran. Islam and Campbell (2014) also found that



although madness was mentioned in the Quran multiple times, this was exclusively within the context of the taunts that the prophets experienced from disbelievers and to refer to those who were ‘spiritually mad’ as a result of their sins. It is important to note that the expressions of madness and possession were used only by pagans to insult the prophets; the Quran may be seen as demonstrating that the relationship between jinn possession and madness is of pagan origins, unrelated to Islam.

Islam and Campbell (2014) offer five possible explanations for the lack of any reference to a relationship between madness and spiritual possession in the Quran: first, the absence of a connection; second, because it is not encouraging of religious enlightenment; third, it may have been discussed in other religious scholarly material such as the Hadith, a compilation of the prophet Mohammed’s sayings and accounts of his daily living and practice (the Sunnah), comprising the second most important source of divine guidance for Muslims after the Quran; fourth, because people were still not prepared for the practice to be prohibited, although it would later be prohibited; finally, it is considered a practice that conflicts with Islam and its teachings. They conclude that there is no straightforward association between mental illness and jinn possession.

The universal belief in Islam, regardless of geographic location, is that God or Allah is responsible for all aspects of human experience including illness. Some religious leaders consider illness “an event, a mechanism of the body that is serving to cleanse, purify, and balance us on the physical, emotional, mental and spiritual planes” (Rasool, 2000, p.1479, cited in Ciftci and Corrigan, 2013). On the other hand, mental disorders may also be seen as a retribution or test from Allah. Muslims firmly believe in *kadr* (destiny), which enables them to accept Allah’s desire more positively and to be more optimistic about healing (Ciftci and Corrigan, 2013). The causes of mental disorders are to a certain degree controversial among Muslims, which can fuel the stigma related to them. Some Muslims believe that mental disorders are caused by a weakness in faith or possession by supernatural forces such as jinn, *seher* (magic) or *hasad* (the evil eye), while others perceive them as Allah’s will, as penance for wrongdoing or a test of conviction (Ciftci and Corrigan, 2013). Such beliefs are reportedly more common among females, the elderly and those with minimal education. However, it is unclear where they originate, as the Quran, which is generally accepted as the source of divine guidance and beliefs for

Muslims to follow, makes no direct reference to mental disorders being a result of supernatural inflictions.

## **2.9 Comparative summary of the newspaper sources and journal articles**

This section provides an exploratory comparison of the findings from the two sources of data and their implications for the present study.

The first theme, advocacy action and concerns, was found to be prolific across the newspaper articles, as well as positive in tone in both newspaper and journal articles. This indicates that while the nursing students who would go on to participate in the present study may have stigmatising tendencies towards people with mental disorders, they are likely to be open to educational interventions and aware of the changing culture within Saudi Arabia towards this patient population.

The second theme, treatment and recovery, also emerged from within both sources. The newspaper articles presented numerous reports on new facilities and developing treatment modalities that were becoming available, while conversely the empirical work explored the spiritual aspects of this theme. The comparisons between Western, particularly British perspectives to those of the Arab world were often researched in regards to responses and receptiveness to treatment types. People from the Arab World were found to be more receptive to treatments that included reference to spiritual aspects than those from the UK. This was an important finding as it raises the question of developing a culturally sensitive educational intervention for Saudi nursing students, namely the inclusion or at least acknowledgement of religion and the attribution of mental illness to spiritual causes.

Theme three found often in the newspapers but less so in the journals was 'dangerousness'. Despite the lack of scientific writing on the topic there was correspondence between the data sources. As the previous discussion showed, the newspaper reports were frequently paternalistic in tone towards people with mental disorders. Usefully for the present study the journal article explored this very aspect in regards to healthcare professionals' fear of danger to others from people with mental disorders. The findings from this article are valuable as they imply that while nursing

students may enter their training with discriminating perceptions (as the newspaper articles suggest they will and Chapter 8 demonstrates that they did), use of an educational intervention that includes content containing people with mental disorders, is likely to be an effective means of countering stigmatising attitudes, knowledge and intended behaviour.

The final theme of 'blame' arose again in both bodies of text. While the newspaper articles explored spiritual causes in depth and subsequently revealing a debate within Arab culture as to the balance and understanding of personal or spiritual blame for mental disorders, the journal articles took a more objective stance. What can be derived from a comparison of this theme across the review is that the nursing students may unintentionally attribute cause of mental disorders to specific sources such as personal responsibility or spiritual forces, rather than from a medical mind-set considering physiological factors.

As the discussion of this thesis moves into the following chapter and presents the research design underpinning this work, the conclusions from this literature review inform the development of an educational intervention that must cater for the unique factors of the Arab world and what they mean for Saudi healthcare professionals.

### **2.9.1 Limitations**

A limitation of this Arab contextual review is that it was conducted after the usability study (Chapter 6) had taken place. The retrospective nature of the Arab contextual review was predominantly a result of time limitations in conducting the present study. It became apparent that this chapter was required to provide the reader with insight into the specific interpretation of mental disorder-related stigma within the Arab world. This was because theory and research are predominantly western orientated in their perspectives and conclusions (as discussed in Chapter 4). A further limitation in the retrospective approach of this review is the time frame for the newspaper search, which was set at the year 2013. This was to inform this thesis and provide a comparison to the findings of the trial conducted within the present study. However, the learning that has been gained from this review that will inform a definitive RCT suggests that reviewing media content from the year prior to the RCT would provide valuable insight into the cultural stigma present at

the time of the trial itself. This is based on the conceptualisation that stigma is ever changing within societal constructs as it is influenced by those very constructs.

The data sources for this review were limited to a selection of newspaper articles for a single year as it was not feasible to select papers at random. Incorporation of television and school materials would have broadened the scope of the review. In addition, if the study were to be repeated, there is also considerable scope for deeper exploration such as by hand-searching archives, and accessing existing networks and related organisations. Despite this, the newspaper articles combined with the academic articles have provided valuable insight into perspectives of mental disorders in the Arab world that may have exerted an influence on the nursing students within the present study.

## **2.10 Conclusion**

The review aimed to identify what mental disorder-related stigmas Saudi nursing students are likely to exhibit by asking two questions:

1. How are mental disorders portrayed in popular Saudi media, specifically newspapers?
2. How are mental disorders in Saudi populations presented in journal articles?

The newspaper articles identified through the review revealed that mental disorders are most commonly portrayed under four themes: blame, dangerousness, treatment and recovery, and advocacy actions and concerns. The journal articles identified that Saudi nationals are more likely to view mental disorders from a cultural rather than a medical perspective. These combined factors highlight the presence of mental disorder-related stigma among Saudis. They also support the development of targeted educational interventions to address the cultural aspects of attitudes, behaviour and knowledge.

## **CHAPTER 3**

### **Research Design**

#### **3.1 Introduction**

The research challenge of responding to mental disorder related stigma introduced in chapter 1 is a complex problem that is further complicated by the multifaceted cultural components discussed in chapter 2. The development of an educational intervention that could be applied within a Saudi context required a robust research design. This chapter describes the overall research design used in this study comprising a sequence of separate yet interrelated studies within the UK Medical Research Council (MRC) framework for the development and evaluation of complex interventions (Craig et al., 2008). In Section 3.2 the overall study aims are restated and the specific objectives of each of the individual studies are listed in accordance with how they sit within the development phase and the feasibility/piloting phase of the MRC framework. The chapter closes with Section 3.3, where each of the interrelated studies is described in relation to the overall design adopted by the study, of phased mixed-methods research.

#### **3.2 Aims and objectives**

##### **3.2.1 Overall aims**

This study set out to develop and evaluate an evidence-based educational intervention to reduce mental disorder-related stigma among Saudi nursing students. As stated in Chapter 1, Section 1.5, the overall aims of the research study were to:

1. Develop a novel educational intervention grounded in an understanding of how mental disorder-related stigma is generated and maintained.
2. Evaluate the preliminary acceptability, feasibility and effectiveness of the intervention in reducing mental disorder-related stigma in a sample of Saudi undergraduate nursing students.

##### **3.2.2 Overall objectives**

The overall study objectives as listed in Chapter 1, Section 1.5 were to:

1. Develop a conceptual framework to explain the maintenance of mental disorder-related stigma in Saudi nursing students grounded in the existing research literature.
2. Develop a media-based educational intervention (DVD) within the above conceptual framework, designed to reduce mental disorder-related stigma in Saudi nursing students.
3. Assess the feasibility and acceptability of the DVD intervention and make necessary revisions.
4. Evaluate the impact of the DVD intervention on students' knowledge, intended behaviour and attitudes towards people with mental disorders in an exploratory randomised trial, in which the intervention is compared with an education-as-usual condition.
5. Explore the possible effects of a three-month clinical placement in an inpatient mental healthcare setting on final year nursing students' knowledge, intended behaviour and attitudes towards people with mental disorders.
6. Identify salient aspects of the clinical placement experience perceived by students to have influenced their views about people with mental disorders.

### **3.2.3 Specific objectives of the two phases of the present study**

The specific objectives of the development phase of the study were to:

1. Establish the theoretical underpinnings of stigma (How is stigma generated and maintained?)
2. Explore theories and strategies on reducing mental disorder-related stigma
3. Describe and formulate a typology of existing educational interventions to reduce mental disorder-related stigma in healthcare professionals
4. Establish the evidence base for the effectiveness of different types of educational interventions in reducing mental disorder-related stigma
5. Conduct a component analysis to draw out the active components and characteristics to be designed into the intervention used in the present study
6. Identify outcome measures that are likely to be influenced by the intervention

7. Model, build and develop the intervention prototype
8. Pilot test the usability and explore the experiences of the intervention prototype and outcome measures on a similar target end-user sample
9. Refine the intervention with feedback gained from the usability test.

The specific objectives of the feasibility/piloting phase of the study were:

1. Pilot test the feasibility of the intervention
2. Provide preliminary evidence for the effectiveness of the intervention in terms of impact on outcome measures of mental disorder-related stigma among nursing students
3. Test the acceptability of the intervention by exploring the nursing students' experiences of it.

### **3.3 Methods**

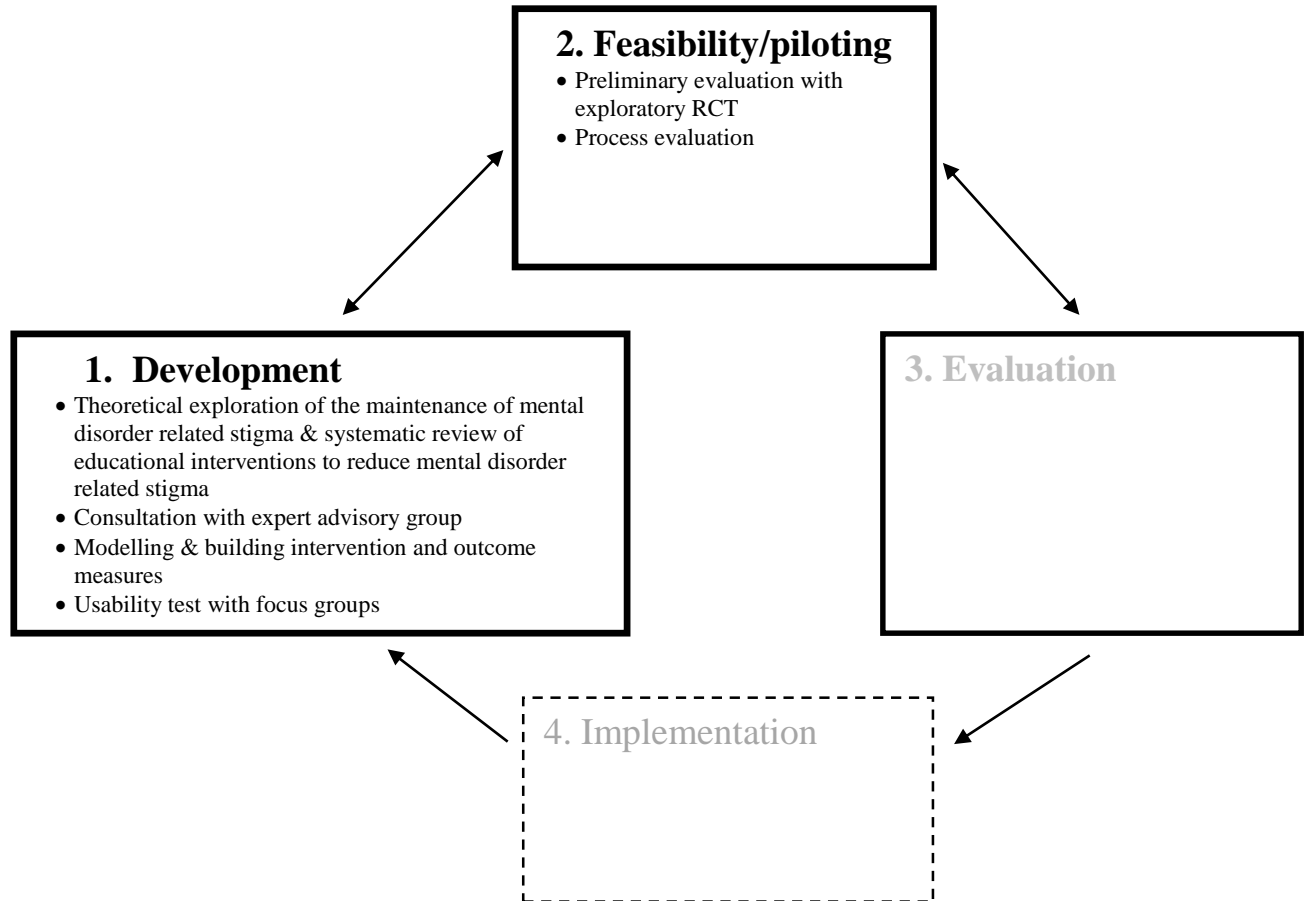
The media-based health education intervention developed in the present study was considered complex as per the definition in the MRC complex intervention framework, since it encompassed a number of interacting components (Craig et al., 2008). These components interacted within and between the intervention, consequently impacting the target groups and the immediate variable outcomes. Classification as a health education intervention stems from the operational model developed from Steckler et al. (1995), which shows the relationship between health education intervention strategies and outcomes. The adaptation of this model as it pertains to the present study is presented and discussed in Chapter 6.

The development, testing and preliminary evaluation of the media-based health education intervention therefore made use of the MRC framework to develop a series of mixed-methods studies, designed to address the research objectives listed earlier, as informed by experts in the subject matter and the filmed perceptions of service users.

#### **3.3.1 Research design**

The present study drew upon the MRC complex interventions framework (Craig et al., 2008) in addressing the key components for the development and preliminary evaluation of the intervention used within this study. The research design relates to the first two

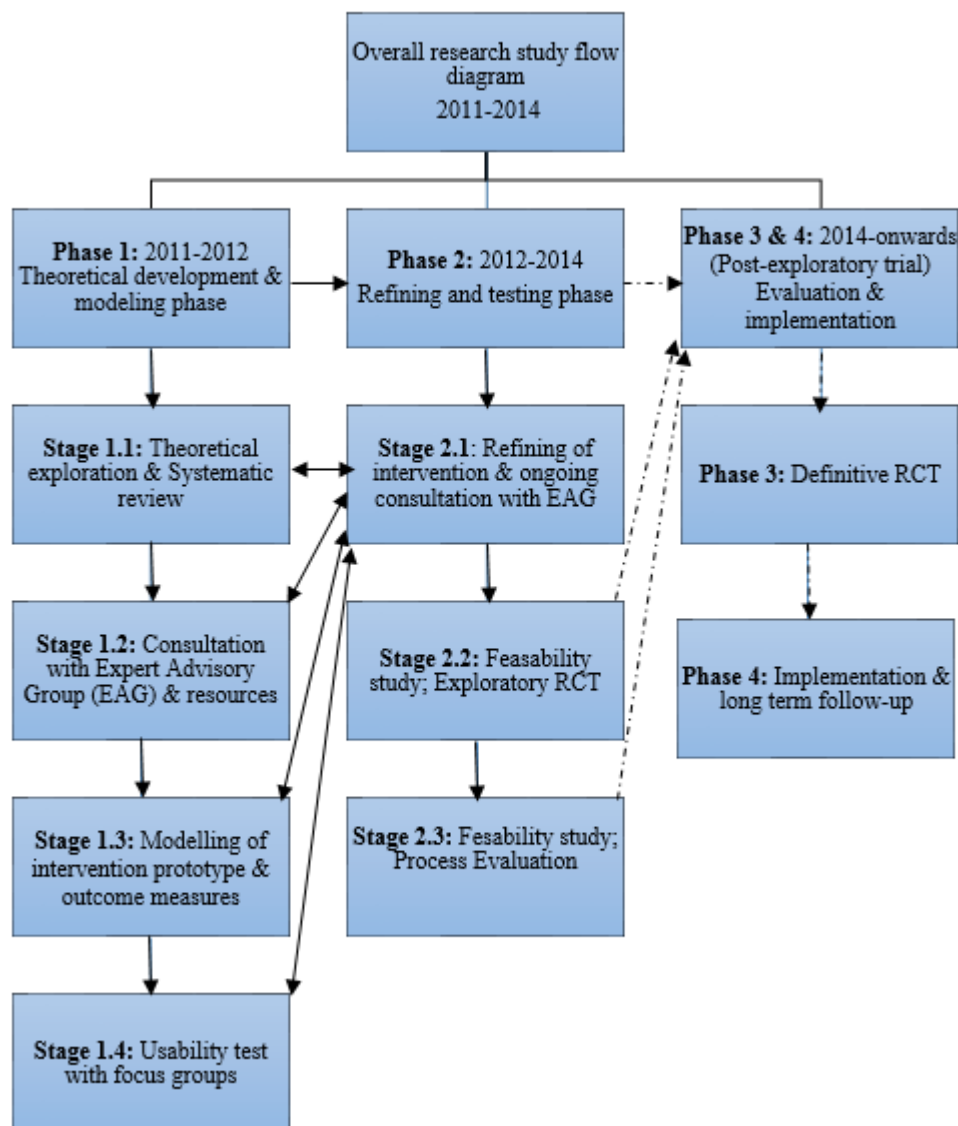
phases of the MRC framework and the specific stages that fall under each phase, as demonstrated in Figure 3.1.



**Figure 3.1** Mixed methods research design of the study using the MRC complex intervention framework (Craig et al., 2008)

A number of separate yet interrelated studies were staged within the two phases of development and modelling and of feasibility/pilot testing. Each of these staged studies had the specific objectives listed in Section 3.2.3 and they functioned collectively to achieve the overall aims and objectives listed in Sections 3.2.1 and 3.2.2. These staged studies and their time points are summarised in Figure 3.2.





**Figure 3.2** Overall research study design with different phases and their time points

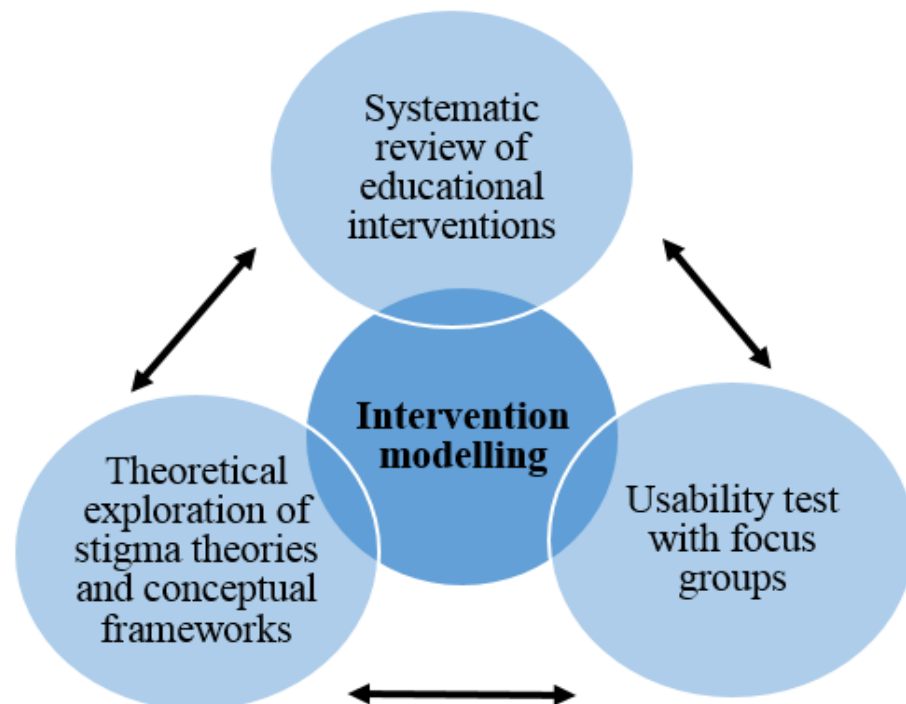
### 3.3.2 The development phase

Of the four phases of the MRC framework for the development and evaluation of complex interventions, the development phase is considered the most crucial, as it can determine the success of the overall evaluation and implementation process. In the development phase, the researcher should consider the logistics and practicalities of conducting the research study prior to embarking on a lengthy and expensive full-scale trial (Craig et al., 2008). The development of the media-based health education intervention to reduce mental disorder-related stigma in Saudi nursing students was conducted using a

systematic approach, with the theoretical grounding of the best available evidence-based literature.

In the development phase, three separate studies were conducted to address the specific objectives of this phase as set out in Section 3.2.3. These studies are listed below and summarised in Figure 3.3:

1. Theoretical exploration of stigma underpinnings and conceptual frameworks used to explain the generation and maintenance of stigma (discussed in detail in Chapter 4).
2. Systematic review to: a) investigate the effectiveness of educational interventions to reduce mental disorder-related stigma amongst healthcare professionals; and b) identify the essential components of successful educational interventions (discussed in detail in Chapter 5).
3. Modelling of the intervention prototype and usability test with focus groups on a similar sample of target end users to explore their views on the content, design and implementation considerations of the educational intervention prototype (discussed in detail in Chapter 6).



**Figure 3.3** The interaction between the staged studies of the development phase informing the modelling and design of the complex intervention

The mixed-methods studies carried out as part of the development phase were conducted in successive stages, beginning with a broad theoretical exploration of stigma theories and conceptual frameworks, then a systematic review of health education interventions to reduce mental disorder-related stigma in healthcare professionals, followed by the modelling of the intervention prototype with the expert advisory group and usability testing with focus groups, exploring Saudi nursing students' experiences of the intervention prototype.

Following the synthesis of evidence-based literature from the two reviews, modelling of the intervention prototype took place. This involved the researcher building and consulting iteratively with stakeholders (members of the expert advisory group and the similar target end users) to develop and refine the intervention prototype and outcome measures. A pragmatic approach was taken to modelling and building the educational intervention, relying on the inclusion of filmed personal testimonies from service users of their experiences of mental disorder-related stigma.

The modelled intervention prototype and its components, including the outcome measures, were tested for usability and acceptability, and focus groups were conducted in order to see whether the intervention prototype was perceived as intended by a sample of similar target end users. Given that the intervention in this research study was media based and had Saudi nursing students as its intended target, a usability study with focus groups rather than a reduced-scale trial was regarded as the most suitable design. Hence, in place of checking the impact of the intervention on the similar target end users, the main aim of the usability test and focus groups was to collect users' subjective opinions of the intervention prototype and its components. These findings were then used to refine and improve the intervention prototype, as well as to modify the implementation strategies in preparation for the following phase of the research study, where the refined intervention was to be assessed for feasibility and effectiveness in an exploratory randomised controlled trial (RCT). Modelling, usability testing and refinement of the intervention prototype are discussed further in Chapter 6.

Although each of the aforementioned staged studies stood independently, they were also interrelated. Figure 3.3 illustrates the overlap between the stages, as the development of complex interventions is seen as an iterative process rather than a cyclical or linear sequence (Craig et al., 2008). The overlap between the staged studies served to benefit

the development of the intervention prototype, as it meant that the intervention was well grounded on the findings and recommendations of all three studies.

### **3.3.3 The feasibility/piloting phase**

The second phase of the MRC framework for developing and evaluating complex interventions is concerned with the feasibility and pilot testing of the intervention. The main question addressed by the researcher during this phase was: Does the intervention work in making a difference to mental disorder-related stigma? (Craig et al., 2008). In order to address this question, the refined intervention was subjected to a feasibility study in the form of an exploratory RCT, which was considered the most suitable method to evaluate the preliminary evidence of effectiveness of the intervention. The RCT was run in a governmental nursing university in Jeddah, Saudi Arabia and used a factorial design to see how the intervention affected nursing students in different years of training. The RCT also used the factorial design to fit with the two essential components (education and social contact) of the intervention, to investigate how each component might impact independently on particular participants' outcomes, minimising any contamination. Full details of the RCT are reported in Chapter 7.

As the RCT was exploratory and aiming to inform the design of future definitive trials the trial also included a process evaluation. This involved interviewing a sample of participants about their experiences of the intervention in relation to their clinical placements, specifically what salient events from the clinical placement affected their views of people with mental disorders. The process evaluation study concluded the overall research study and is reported in detail in Chapter 8. Finally, the results of the RCT, the process evaluation study and the overall research study are discussed in Chapter 9.

## **3.4 Conclusion**

Within this chapter the overall aims and objectives of the present study have been introduced and explored, namely the development and preliminary evaluation of a media-based health education intervention to reduce mental disorder-related stigma among nursing students in Jeddah, Saudi Arabia. This aim has been grounded within the MRC framework for the development and evaluation of complex interventions. The application of this methodology to the present study begins in the following chapter with the

introduction of the development phase exploring theories of mental disorder-related stigma and stigma reduction strategies.

## **CHAPTER 4**

### **Theories of mental disorder-related stigma and stigma reduction**

#### **4.1 Introduction**

This chapter provides an exploration of the theoretical underpinnings of stigma, with a special focus on public stigma related to mental disorders. This exploration constitutes the first of three staged studies in the development phase of the overall study (Figure 3.3). Section 4.2 explains the background to the theoretical exploration, then the aim and objectives are set out in Section 4.3. The historical and recent theories that attempt to explain the generation and maintenance of public stigma are discussed in Section 4.4 and their limitations are considered in Section 4.5. Strategies for reducing mental disorder-related stigma are examined in Section 4.6 and the chapter closes with a summary.

#### **4.2 Background and justification**

The public stigma of mental disorders can have severe consequences for the quality of life of the individual with the mental disorder, as discussed in Chapter 1. Although a rich body of literature on stigma research exists, it appears that the evidence base varies in quality and type, with relatively few studies being conducted on stigma reduction interventions or initiatives that are based on theoretical models or conceptual frameworks of stigma. This point is exemplified in a review of studies of public attitudes to mental disorders conducted between 1999 and 2004, whose authors, Angermeyer and Dietrich (2006), conclude that although there is an abundance of such studies, most are almost wholly descriptive, whereas there is a paucity of studies that have tested theory-based models of stigma, which could inform the identification and development of anti-stigma initiatives (Corrigan et al., 2000). Also underrepresented are studies analysing time trends, evaluating interventions aimed at increasing knowledge of mental disorders and exploring cross-cultural attitudes and beliefs regarding mental disorder-related stigma. Evaluations of theory-based models of stigma are hampered by the challenge of conceptualising stigma, because concepts of stigma vary over time and across cultures. Stigma is considered to be alterable by the social constructs of any particular era (Stafford & Scott, 1986).

Stigmatising attitudes can also be affected by major world events, which may lead people to re-evaluate, question and reassemble social values (Whitehead et al., 2001). The holocaust provides one such example of a world event, which changed the concept of stigma. German Nazis came to believe that they were ‘racially superior’ to the Jews, whom they perceived as inferior and a threat to the German state and the ethnic German community, resulting in an attempt to eradicate the entire Jewish population. The German authorities of the 1930s and early 1940s also persecuted other minority groups because of their perceived racial inferiority, such as those with disabilities and Roma gypsies (United States Holocaust Memorial Museum, 2014). During such events, shifts occur in stigma-related concepts and what were once clear lines between perceived deviance and orthodoxy may become distorted and vague, increasing the probability that differences will appear and hence that stigma will arise. In Western countries, a further example is the change in the conceptualisation and hence in the stigmatisation of homosexuality, which until 1973 was classified by the DSM-2 as a mental disorder (Spitzer, 1981), whereas it is now widely seen, at least in the West, as a freely adopted and practiced sexual preference.

In summary, the theoretical conceptualisation of stigma is difficult due to its changing nature, but necessary for the development of successful interventions and initiatives to reduce stigma.

### **4.3 Aim and objectives**

The purpose of this theoretical exploration of the development and maintenance of stigma was to inform the development of the intervention used in this study.

The objectives of this theoretical exploration were to:

1. Explore theoretical explanations of the generation and maintenance of stigma, and
2. Explore theories and strategies for reducing mental disorder-related stigma.

### **4.4 Theories of the development and maintenance of public stigma**

Whilst theoretically based models of stigma have not been extensively tested, according to Angermeyer and Dietrich (2006), two of the more recently developed conceptualisations used frequently to explain how mental disorder-related stigma develops and is maintained are those of Link and Phelan (2001) and Corrigan (2000).

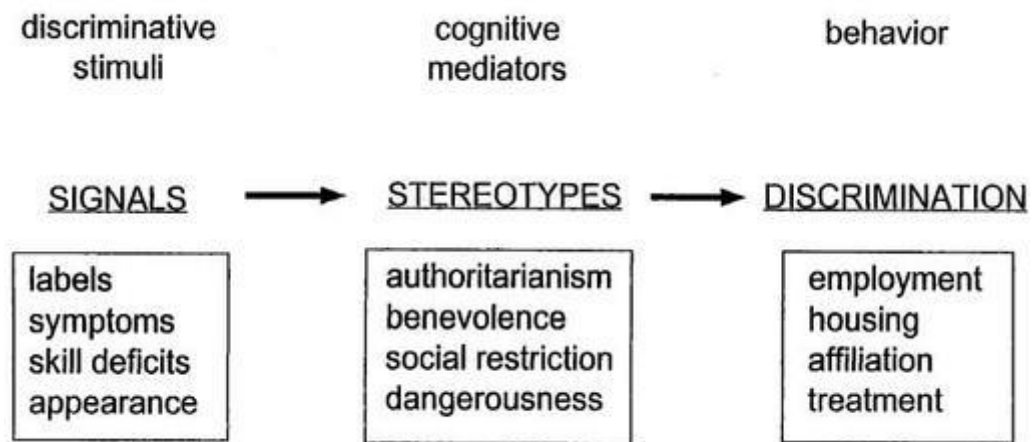
Link and Phelan's (2001) sociological theory of stigma draws heavily on labelling theory (Becker, 1963) and Corrigan and colleagues' (2000) social-cognitive models, which emphasise the role of attribution theory (Weiner et al., 1988). Another recent theory of mental disorder-related stigma is that of Thornicroft (2006), which proposes that stigma is a multifaceted concept consisting of three aspects: issues of knowledge (leading to ignorance), issues with attitudes (leading to prejudice) and issues of behaviour (leading to discrimination). While the proposed theories have overlapping similarities, there are important differences between them.

In explaining his model of stigma (Figure 4.1), Corrigan (2000) notes that stigma is a key issue that should be addressed to improve the prognosis for those suffering from mental illness. Corrigan differentiates between two types of stigma, one relating to self-stigmatisation and diminished self-esteem, the other to a public stigma that follows the labelling of a person as mentally ill. Corrigan and Kleinlein (2005) regard stigma as a negative attitude towards those with mental disorders, while public stigma is the response of the general public to individuals with mental disorders, which has three essential components: stereotypes, prejudice and discrimination (Corrigan, 2000; Corrigan & Penn, 1999). Stereotypes are defined as the cognitive knowledge structures of attitudes that help people to think effectively (Corrigan, 2000). Similar to attitudes, they can be either positive or negative. Prejudice is considered the product of the cognitive and emotional merging of negative stereotypes (Corrigan, 2000; Corrigan et al., 2011), which leads to discrimination as a behavioural reaction (Crocker et al., 1998). Prejudice occurs when a person chooses to accept a negative stereotype. Finally, in the context of power differences, discrimination (which is the behavioural outcome of prejudice) refers to the way that members of the public who accept such a stereotype behave towards those who are so stigmatised. Corrigan and colleagues also note that having a collective label for all types of mental illness prevents consideration of the many different types of illness or the differences in severity among sufferers. As a result, Corrigan suggests, the umbrella term 'mental illness' is a barrier to reducing stigma.

These features of stigma are of particular importance in understanding how it can often make people with mental disorders less likely to seek help early or at all, hence delaying treatment and making prognosis less favourable. Indeed, whilst it could be argued that it



can take a great deal of bravery and determination to seek help for a mental disorder, such positive attributes are not publicly associated with mental illness.



**Figure 4.1** The relationship between stigma signals (cues), stereotypes (attitudes), and behaviours (discrimination) (Corrigan et al., 2000)

Thus, Corrigan sees a negative association between stigmatising views of mental illness and care-seeking behaviour. For example, the number of people seeking help for mental illness was only around 30%, suggesting that some 70% of people suffering from mental illness were not actually seeking help. Of those who did seek help and were either taking medicines or having therapy, as many as 60% dropped out before completing treatment. Corrigan highlights the key role of stigma in explaining this poor adherence to mental health treatments, which is detrimental to the potential service user. Furthermore, Corrigan notes the part that stigma plays in hospitalisation and so in adding to the financial burden of healthcare services.

Corrigan's model suggests that stigma comprises a combination of social and cognitive factors: i) cues or signals, ii) stereotypes, iii) prejudice and iv) discrimination. These cues may include personal appearance, symptoms of illness, a lack of social skills or labelling, and may lead to inaccurate judgements about others. Stereotypes are considered to provide chunks of quickly accessed information formed from public opinion about mental illness. Prejudice includes factors such as fear of people with illness or dislike of people who, for example, show certain symptoms that are characteristic of a disorder such as schizophrenia or depression. In Corrigan's model, discrimination is the cumulative outcome of the stigma, with people perhaps avoiding those with mental illness. This affects life opportunities, not only in terms of seeking or avoiding medical or psychological care, but also in terms of access to employment or housing, as a result of

discrimination by employers or landlords. Discrimination is also seen in the justice system, with longer prison sentences and a greater likelihood of arrest for people exhibiting certain types of behavioural symptoms. Finally, the quality of general medical care is worse for those labelled as mentally ill.

Corrigan and Penn (1999) offer three key recommendations for reducing stigma: protest, education and contact. However, it is not wholly clear how they can be effectively followed to reduce stigma. For example, whilst media campaigns (a form of protest) can challenge negative stereotypes or the use of unfair media representations of mental illness, the results of effectiveness studies are mixed. Improving knowledge does nonetheless appear to improve attitudes; Corrigan argues that this may be because it allows the learner/viewer to make decisions based on the knowledge given, perhaps in contrast to the protest approach. However, the impact of increased knowledge does seem to be short lived and changes should be lasting if they are to be beneficial in the long term. Contact is important if members of a community are to have experience of people with mental illness functioning in society, whether studying, working or performing other common roles. Whilst some theories see contact as sufficient to give the individual the full status of a person, it may be that what is required is evidence that people with mental illness can function in real-life settings.

Returning to the concern of Angermeyer and Dietrich (2006) with which this section began, it is important to note that however detailed and persuasive Corrigan's model may be, all aspects of it should be subject to rigorous empirical testing if it is to be of lasting value in practice. Indeed, Corrigan has himself mentioned the importance of establishing causality in studies of ways of reducing stigma, rather than relying on correlational analyses, which at best show that concepts and variables are related to one another, not which actions or attitudes cause which outcomes.

Cohen and Struening (1962) investigated the attitudes of mental health staff (n=1194) in two hospitals towards their patients with mental illness. Using multifactor analysis, they conclude that five dimensions underpin stigmatising attitudes: "authoritarianism, benevolence, mental hygiene ideology, social restrictiveness, and interpersonal aetiology" (p. 290). More recently, media research and independent factor analysis by Rusch and colleagues (2005) have revealed that three of the factors identified by Cohen and Struening are still common today among public misconceptions of individuals with

mental illnesses. First, authoritarianism is the assumption that mentally ill people are inferior to others because they are unable to take care of themselves and are reckless in nature; they should therefore be coercively controlled (Corrigan & Penn, 1999; Corrigan et al., 2011). The second factor is benevolence, which offers a more compassionate view of the mentally ill, but ascribes to them the naivety of children. This misconception has its origins in religious belief, which favours gestures of kindness to the most unfortunate of souls (Cohen & Struening, 1962; Couture & Penn, 2003). Finally, social restrictiveness, otherwise referred to as fear and exclusion, assumes that those who are mentally ill are dangerous and pose a threat to society, so should be kept as remote as possible from other people (Cohen & Struening, 1962; Corrigan, 2000).

In contrast to Corrigan's theory of stigma, Link and Phelan (2001) propose that mental disorder-related stigma is a result of four interrelated and converging components: "labelling, stereotyping, separation, and status loss and discrimination co-occurring in a power situation". Labelling means that individuals differentiate among human variations, then label or mark them. Next, people use customary cultural beliefs shared amongst the community to draw a connection between labelled individuals and unfavourable attributes. In the third component, separation occurs between labelled individuals and other members of the community, forming 'them' and 'us' groups respectively. Finally, labelled individuals are subject to status loss and discrimination; in other words, treated unfairly by the community.

Link et al. (1999) detail how stigma can harm the self-esteem and wellbeing of someone suffering from a mental illness. Their 'modified labelling theory' identifies stigmatising beliefs as a factor in the prognosis for mentally ill persons, which is thus affected not only by the original symptoms, but also by social rejection. They argue that stigma causes people to feel devalued and hence sometimes secretive about receiving treatment. Patients may therefore withdraw from social groups or even treatment in order to avoid stigmatisation, leading in turn to a weakening of the support networks that are much needed during periods of instability. Link and Phelan (2001) also discuss the devastating effects on employment, housing, quality of life and legal outcomes that Corrigan and colleagues include in their framework.

In a study of stigma, Link and colleagues (1999) used vignettes to assess a number of public beliefs and attitudes, and then compared their results with those of the STAR study

of public response to mental illness some 50 years earlier. Specifically, they explored participants' ability to recognise disorders, beliefs about their causality, perceptions of violence and danger associated with mental illness and finally the desire for social distance. Schizophrenia was the only disorder that was identified with mental illness, whilst depression and substance abuse were not. The findings on causality suggest a diathesis-stress approach that represents both the environment and biochemical and genetic factors, which are commonly discussed in research today. However, participants were found to express elevated levels of fear, suggesting that people consider mentally ill persons to be more violent than they are in reality. Link and colleagues (1999) also report finding a desire for social distance, which they attribute to this increased perception of fear. Their model highlights knowledge and education as important in the formation of stigmatising views.

The notion of concealment of a disorder to avoid stigmatisation is further considered in a framework proposed by Jones et al. (1984), later applied to medical conditions that could be deemed 'invisible', such as diabetes (Joachim and Acorn, 2000). The framework incorporates the need for stress and personal beliefs to be considered in chronic illness. The causes of stigmatising beliefs are discussed in more detail by Feldman and Crandall (2007), who assessed perceptions of social distance and rejection in relation to 40 vignettes of mentally ill people, in a sample of 270 participants. Feldman and Crandall identified three key factors that were predictive of social distance scores: i) responsibility for illness (for example, the perception that the person was at fault for their condition), ii) danger associated with the illness (for instance, whether the person depicted in the case study was a danger to others) and iii) how rare the illness was, arguably because rare disorders were deemed to be more serious.

Earlier, Jones and colleagues (1984) had identified six dimensions of stigma: concealability, course of the mark, disruptiveness, aesthetic qualities, origin and peril. Concealability is the degree to which the stigmatising situation can be obscured or apparent to others. It also refers to the controllability of its apparentness and whether or not the stigmatised have control over hiding or showing it. Course of the mark is related to changes in the stigmatising mark over time: whether it worsens, diminishes or remains unchanged relative to the social expectations of the condition. This is a socially constructed prognosis related to the consequences and outcomes of the disorder over time (Whitehead et al., 2001). Disruptiveness is the extent to which the disorder acts as a social

hindrance, impeding usual social communication. Aesthetic qualities are the unattractive or disfiguring qualities of the disorder, which are hard to hide and which cause others to react in a biased manner towards them. They are usually beyond conscious control; people may spontaneously shrink back, for example, or make a face at the person exhibiting the aesthetically disconcerting qualities. Although such gestures are in response to the disfiguring trait and not the sufferer, that person will be likely to see themselves rather than the trait as being repugnant, resulting in self-stigma. Origin refers to the aetiology of the disorder as perceived by others: whether it was brought about unintentionally (for example as a result of a car crash accident or congenitally), or intentionally by the stigmatised individual (such as in the case of drug abuse or excessive alcohol consumption) (Jones et al., 1984). Additionally, it deals with the degree to which the stigmatised individual is seen as responsible for causing the mark. Peril, the final dimension of stigma, focuses on society's perception of the danger and threat that an individual suffering from stigma poses, relative to the average member of the public (Whitehead et al., 2001).

Crocker and colleagues (1998) identify what they view as the three integral characteristics of stigma and stigmatisation. The first is the *pervasiveness* of stereotypes amongst the public, whether due to the influence of the mass media in more developed countries or of folktales and religion in non-Western cultures, where arguably the media play a less dominant role in peoples' lives. The suggestion is that because most media depictions of mental disorders are negative, classical conditioning may be triggered in any individual having a personal encounter with a mental disorder sufferer, resulting in prejudice against that person (Ottati et al., 2005). People learn to devalue and stigmatise others who are different from themselves early in childhood (Crocker et al., 1998). Stereotypical beliefs are so deeply rooted and familiar due to repetition that people tend to treat them as true. However, the fact that people are often aware of the common stereotypes in their immediate environment does not imply that they will necessarily endorse and act upon them. Indeed, some researchers go much further, asserting that there is no such thing as social stigma and that it is a figment of society's imagination (Corrigan and Penn, 1999). Conversely, Fiske (1998) posits that 'stereotyping automaticity' occurs when members of the public stigmatise despite their best intentions, being unaware that they are doing so.

The second characteristic relates to the *ambivalence* of the public in the portrayal of stigmatising reactions towards those who are in possession of the stigma, which Katz and colleagues (1986) describe as a consequence of two conflicting ideals: egalitarianism and individualism. Egalitarianism is the conviction that every person is entitled to parity of rights, whether economic, social or political. It promotes sympathy for those stigmatised, in contrast to individualism, which places greater worth on individual achievement than on that of the group, thus seeing those who are stigmatised as accountable for their destiny.

The third characteristic is *anxiety*. Contact between the public and stigmatised individuals is likely to result in anxiety and apprehension for both parties, stemming in part from fear of the potential negative results of such encounters. Members of the public may be anxious about those with a stigma because of insufficient knowledge about their condition, similar to fear of the unknown, unless they have been acquainted with someone having a similar stigmatising mark or condition. They are likely to be influenced by what they believe to be true, which in most cases will be the negative or erroneous stereotypes, which pervade their immediate environment, be it via the media or in the form of cultural tales. They will exhibit their anxiety in nonverbal behaviours such as squirming, restlessness, reduced eye-to-eye contact and positioning themselves distantly. Even non-prejudiced individuals who reject the stereotypes in question and are accepting of those with a stigmatising condition may still be truly anxious about the threat that the person or condition might pose. Such public perceivers may try consciously to suppress and/or reject any automatic negative thoughts about the stigma that might trigger prejudicial behaviour, but at the same time may remain curious regarding the condition. Their attempted thought repression, while well intentioned, may be ineffective and result in frustration, unease and anxiety around those with a stigmatising condition. This point is based on the psychological theory, which states that when an individual is asked not to think of a pink elephant, he/she is most likely to be unable not to do so. For their part, those who are stigmatised will experience anxieties about contact with the public related to the fear of being unwanted, ashamed, mocked or humiliated.

Hinshaw (2006) identifies an additional characteristic: 'self-denigration and shame'. He proposes that discrimination, rejection and stigmatisation of the tainted person may trigger a decrease in the tainted individuals' self-esteem and an increase in their feelings

of shame. Shame is the result of ruminating over internalised feelings of devaluation and worthlessness, a notion referred to as ‘felt or internalised stigma’ (Crocker et al. 1998). Felt stigma has been defined as the shame that accompanies the stigmatising condition, experienced by victims who feel that they have failed to live up to the standards and expectations of society by doing something dishonourable or wrong (Crocker et al. 1998). However, recent research has questioned this proposal, arguing that not everyone who is stigmatised will internalise these feelings and develop reduced self-esteem. One explanation is that self-esteem differs from one individual to another as a function of collective representations, situational cues and personal characteristics (Crocker and Quinn, 2000). Thus, some individuals will attribute the prejudice to the condition they suffer from and not to personal flaws within themselves, while others may even consider it a cause to actively join advocacy groups against the stigma (Crocker et al. 1998). In the case of mental illnesses such as major depression, whose sufferers are likely to have feelings of worthlessness, hopelessness and helplessness, it is arguable that they are especially prone to develop self-denigration, because the symptoms of most such disorders include low mood, making them especially susceptible. They are also more likely to feel shameful about their disorder because it involves major life-disrupting events such as sectioning, job loss and in more severe cases, loss of mental capacity.

Hinshaw and Cicchetti (2000) acknowledge that stigma does not reside exclusively in the public mind, but is also ingrained in professional attitudes, leading to discrepancies that include less funding for research and poorer quality of care relating to mental illness. Hinshaw and Cicchetti (2000) discuss a ‘dehumanizing’ stigma that is apparent across society and which should be countered by a strategy of knowledge enhancement. They accept the social cognitive basis of stigma proposed by Corrigan and Penn (1999), but note the need for legislative changes to promote a more empathic and accepting view of mental illness, whilst providing equal rights in terms of humane treatment in care and protected insurance rights, which are often limited for those with mental illness. They also recognise that radical policy changes risk public stigma in the form of resentment to ‘special treatment’, as highlighted by Campbell and Heginbotham (1991), arguing nonetheless that this is not a reason for inactivity. Using a similar framework to that of Corrigan and Penn (1999), Hinshaw and Cicchetti (2000) also note the need for protest and education among the approaches to reducing public stigma.

Kurzban and Leary (2001) offer a controversial approach to the subject, conceptualising stigma, stigmatisation and social exclusion through an evolutionary lens rather than as a social construct. They reject the assumption of Jones et al. (1984) and Crocker et al. (1998) that to be stigmatised means to be “negatively evaluated”, arguing that negative evaluation is an “inevitable part of social life” and that not every negative evaluation counts as an incidence of stigmatisation. Instead, they propose that humans have cognitive adaptations that lead to interpersonal disassociations and that “there exists a collection of distinct, domain-specific psychological mechanisms that have evolved to solve adaptive problems associated with sociality” (Kurzban and Leary, 2001).

While stigma has been conceptualised in many ways, as explained in the foregoing discussion, there are two elements that appear to be central to stigma and shared amongst its many conceptualisations: behaviour and attitudes. According to Thornicroft (2006), stigma can be conceptualised as a problem of three domains: knowledge, leading to ignorance; attitudes, leading to prejudice; and behaviour, leading to discrimination. Thornicroft notes that prejudices arise from a lack of ‘mental health literacy’ or ignorance of the facts. This leans heavily on the idea of improving knowledge in order to reduce stigma in mental illness. For example, Thornicroft et al. (2007) assert that public beliefs in this area, such as the assumption that mental illnesses are incurable, are largely inaccurate. The general population also heavily underestimates the incidence of mental illness. However, knowledge alone is not to blame. For instance, although awareness of mental illness is increasing, people still tend to be fearful of sufferers and to perceive similarities between mental illness and diminished responsibility for action. This would suggest that not only knowledge itself but how it is delivered is important. Prejudice may be described as hostility, ill feeling or negativity towards an out-group. The authors also mention emotions and how they may be involved through heightened arousal and a feeling of being uncomfortable around certain groups of people, such as those labelled as schizophrenic in a controlled study. When it comes to behaviour towards those with mental illness, however, Thornicroft and colleagues (2007) assert that although there are links between self-reported behavioural measures and actual behaviour, the majority of research is theoretical. Other considerations could include intended behaviours such as hiring a mentally ill person for a job role, but the focus has been on assessing the use of interventions to tackle the three criteria, aiming to reduce stigma by increasing knowledge and improving attitudes and behaviour towards those suffering from mental illness.



Although mostly similar to Corrigan's conceptualisation, that of Thornicroft (2006) differs with respect to the issue of ignorance. According to Thornicroft (2006), shared public knowledge of mental illness remains limited in accuracy. Many studies have shown that this is also the case among healthcare professionals (Mukherjee et al., 2002; Fernando et al., 2010; Yamauchi et al., 2011). Hence, for the purpose of this study, Thornicroft's conceptualisation of stigma has been chosen, with the hypothesis that the proposed educational intervention will work to reduce stigma among the targeted population of nurses by increasing their knowledge and correcting misconceptions about mental illness, in turn positively influencing their behaviour and attitudes regarding mental illness.

In summary, there are many theories of the development and maintenance of public stigma, the most influential and comprehensive of which are those of Link and Phelan, Corrigan and Thornicroft. Other descriptive theories related to the key components, dimensions and characteristics of stigma are those of Cohen and Struening, Jones and colleagues, Crocker and colleagues, Hinshaw, Kurzban and Leary, all of which have also contributed in some way to the study of stigma.

#### **4.5 Limitations and summary of stigma theories**

A majority of the models used to explain mental disorder-related stigma tend to focus on individual-level psychological conceptualisations of stigma, failing to take into consideration broader sociological paradigms that include structural or institutional concepts of discrimination and prejudice (Thornicroft, 2006; Link & Phelan, 2001). As a result, mental illness tends to be detached from conventional disability policy, offering policymakers few suggestions as to the appropriate action to combat stigma. Another reason for the paucity of governmental involvement and of international campaigns calling for better care is that there has been very little stigma research linking mental disorder treatment and human rights, particularly with regard to those being sectioned.

According to Link & Phelan (2001), a major limitation of many theories of stigma as applied to mental disorder is that they have been developed without taking account of the lived experience of the individuals whose stigmatised identity they seek to explain. Most existing theories of stigma value and rely on analytical assumptions and research techniques, rather than the verbatim accounts and perceptions of their stigmatised

subjects, leading to a misinterpretation of the experience of stigmatisation (Link & Phelan, 2001).

Furthermore, stigma theories that treat the stigmatiser as a 'perceiver' and the stigmatised as a 'target' tend to focus on one-to-one interactions, rather than the role of stigma in the social and cultural domains, which may give an oversimplified view of a rather complex and multifaceted concept, whereby the stigmatised are victimised, which is not always the case (Dovidio et al., 2000). A further limitation of stigma theories is that they are usually devised by academics and based upon the prior literature, lacking the input of service users which would reflect clinical practice and policies (Thornicroft, 2006). Much of the empirical research is of low methodical rigour and of a narrative nature, commonly based on surveys of attitudes to media portrayal, leaving a large gap in the literature in terms of high quality studies of the effectiveness of interventions to reduce mental illness-related stigma (Pinfold et al., 2005). Further, the literature lacks research covering dual diagnosis and comorbidities, and is predominantly disorder-specific, looking mostly at schizophrenia.

It was concluded that the relationship between stigma and mental health outcomes is observed to be significantly negative for sufferers and their prognosis, resulting in hospitalisation and an increased financial burden for the healthcare system. These poor outcomes were considered to be due to both public stigma and self-stigmatisation. In terms of social cognitive models of stigma, public stigma was related to negative stereotypes formed from inaccuracies in the understanding of mental illness due to poor *knowledge*, ignorance and misconceptions about mental illness, such as those about inferiority, inability to self-care, beliefs about prognosis, dangerousness, lack of awareness about recovery, customary cultural beliefs and the influence of the media. Research has shown that these inaccuracies are present among the general public and healthcare professionals, and may be constructed at an early stage in life through their constant repetition. Such negative stereotypes are ingrained cognitive structures of fear or dislike of people with mental illness, leading to negative *attitudes* towards those with mental illness and resulting in prejudice. The theory also suggests that these attitudes will have the cumulative outcome of *discriminative behaviour*, which has been observed in relation to the desire for social distance and avoidance of those with mental illness, with a range of negative effects: damaging social relationships, limiting access to housing and

employment, reducing the quality of general medical care and engendering harsher punishments via the criminal justice system.

Self-stigmatisation was thought to occur under the same belief systems, resulting from the acceptance of negative stereotyping about mental illness. This was shown to be detrimental, leading to withdrawal from social groups and weakening support networks through shame and beliefs about being inferior. Self-stigmatisation was also noted as creating a barrier to seeking treatment, with only a minority (30%) of those suffering from mental illness seeking care at all and a majority (60%) of these subsequently withdrawing from treatment (Corrigan et al., 2011). However, it was also noted that differences in self-esteem may also affect the extent to which self-stigmatisation was attributed, with this not occurring for all persons. The theories presented and appraised in the previous sections are summarised in Table 4.1.

**Table 4.1** A typology of stigma development and maintenance theories

Theorists and conceptualists	Key components in the development and maintenance of stigma	Limitations
Link and Phelan	<ul style="list-style-type: none"> <li>• Labelling</li> <li>• Stereotyping</li> <li>• Separation</li> <li>• Status loss and discrimination co-Occurring in a power situation</li> </ul>	<ul style="list-style-type: none"> <li>• Focuses on individual level psychological conceptualisations of stigma</li> <li>• Fails to consider structural or institutional concepts</li> <li>• Produces limited recommendations for policy makers to combat stigma</li> </ul>
Corrigan	Social and cognitive factors: <ul style="list-style-type: none"> <li>• Cues or signals</li> <li>• Stereotypes</li> <li>• Prejudice</li> <li>• Discrimination</li> </ul>	<ul style="list-style-type: none"> <li>• Focuses on individual level psychological conceptualisations of stigma</li> <li>• Fails to consider structural or institutional concepts</li> <li>• Produces limited recommendations for policy makers to combat stigma</li> </ul>
Thornicroft	Stigma a problem of three: <ul style="list-style-type: none"> <li>• Knowledge leading to ignorance</li> <li>• Attitudes leading to prejudice</li> <li>• Behaviour leading to discrimination</li> </ul>	<ul style="list-style-type: none"> <li>• Focuses on individual level psychological conceptualisations of stigma</li> <li>• Fails to consider structural or institutional concepts</li> <li>• Produces limited recommendations for policy makers to combat stigma</li> </ul>
Cohen and Struneg	Components of stigmatising attitudes: <ul style="list-style-type: none"> <li>• Authoritarianism</li> <li>• Benevolence</li> <li>• Mental hygiene ideology</li> <li>• Social restrictiveness</li> <li>• Interpersonal aetiology</li> </ul>	<ul style="list-style-type: none"> <li>• Although positively this concept stems from practical research, it fails to include the perceptions of those who are stigmatised</li> </ul>

Jones et al	<p>Six dimensions of stigma:</p> <ul style="list-style-type: none"> <li>• Concealability</li> <li>• Course of the mark</li> <li>• Disruptiveness</li> <li>• Aesthetic qualities</li> <li>• Origin</li> <li>• Peril</li> </ul>	<ul style="list-style-type: none"> <li>• Although positively this concept stems from practical research, it fails to include the perceptions of those who are stigmatised</li> </ul>
Crocker et al	<p>Characteristics of stigma:</p> <ul style="list-style-type: none"> <li>• Pervasiveness</li> <li>• Ambivalence</li> <li>• Anxiety</li> </ul>	<ul style="list-style-type: none"> <li>• Focuses on individual level psychological conceptualisations of stigma</li> <li>• Fails to consider structural or institutional concepts</li> <li>• Produces limited recommendations for policy makers to combat stigma</li> </ul>
Hinshaw	<p>Characteristics of stigma:</p> <ul style="list-style-type: none"> <li>• Self-denigration and shame</li> <li>• Dehumanizing stigma</li> </ul>	<ul style="list-style-type: none"> <li>• Over simplified conceptualisation of stigma in the narrow confines of the ‘perceiver’ and ‘target’</li> </ul>
Kurzban and Leary	<ul style="list-style-type: none"> <li>• Argue against the traditionally accepted role of stigma</li> <li>• Propose that stigma is a necessary evolutionary adaptive process</li> </ul>	<ul style="list-style-type: none"> <li>• Although presenting a unique alternative angle to concepts of stigma, the theory it appears to be an over simplification of the complexities of society</li> </ul>

## **4.6 Theories and strategies for reducing mental disorder-related stigma**

As the beliefs and attitudes involved in stigma can often be deep and rigid long-term aspects of societal norms and personal opinions, the reduction of stigma is not easy. There is nonetheless a thread of psychological research that seeks to identify ways in which mental disorder-related stigma can be reduced. The bulk of this research highlights stereotypes, prejudice and discrimination as the main causal factors underlying stigma and hence targets them in order to reduce stigma in society. While much of the work reported in the literature is theoretical, a number of practical implications are discussed (Collins et al., 2012; Corrigan & Penn, 1999). In particular, there has been a strategic focus on the need for improved public knowledge of the facts of mental illness (education), on the need for changes in policy to reduce discrimination in a variety of settings (protest) and on the need for individuals, including healthcare professionals, to have greater exposure to positive personal experiences with those who have mental disorders (contact). As a result, a number of interventions have been researched and successfully enacted, including informative advertising campaigns and speaker-led presentations to groups of people, often healthcare professionals.

In a review of strategies to reduce stigma to mental disorder, Rusch et al. (2005) discuss a number of cases where the three key strategies above have been successfully implemented. In its work across the USA, the National Alliance of the Mentally Ill (NAMI), also known as the StigmaBusters, whose members include those suffering from mental disorders and their relatives, seeks to educate the public in order to reduce discrimination. NAMI's 'protest', which has involved challenging media conceptions of mental disorder, as well as highlighting legal, employment and housing issues to bring about better legal protection for mentally ill people, has had notable success. Similarly, in Germany, the protest strategies of the Alliance for Mentally Ill People (BASTA) include media campaigns, email communications and cultural events such as art exhibitions created by people with mental illness. BASTA has also delivered education programmes with a contact theme and run these in police training facilities and in schools, using a combination of the three key strategies to bring about a noteworthy reduction in stigma. Other successful strategies to change public perceptions and stigma have included an initiative to inform journalists about mental illness in order to help reduce stigmatising

views being depicted in the media, the use of video workshops, activities and engagement with service users.

The remainder of this section considers in turn each of the key stigma reduction strategies and a ‘multicomponent’ approach combining all three.

#### **4.6.1 Education**

Many initiatives have set out to reduce stigmatising views by providing knowledge about mental illness and by presenting evidence against common misconceptions. For example, despite the increasing number of successful treatments for various types of mental illness and the increasingly positive prognosis, public opinion still incorrectly suggests that mental illness is incurable. Knowledge of the origins of mental illness is also important in educational programmes in order to address misunderstandings of how and why mental illness occurs. Whilst some educational strategies have worked to reduce stigma in a professional context, such as providing mental health literacy training for the police, healthcare professionals or students (Rusch et al., 2005), other initiatives focus on self-stigmatisation and help to modify the beliefs that some people with mental illness have about themselves and which damage their own self-esteem and self-worth (Collins et al., 2012). The duration of such initiatives varies, with some interventions lasting as little as a couple of hours, while others span weeks or months, many having succeeded in changing attitudes and intended behaviour (Collins et al., 2012). The educational approach often involves videos, lectures, talks, focus groups and presentations, in the form of short sessions or courses, with select groups of participants.

This strategy generally appears cost effective, requiring only modest expenditure on advertising budgets and campaigns, but its long-term benefits require further investigation. In addition, the issue is still complex and the material choices for education strategies are of the utmost importance. This means that understanding more about the causes or outcomes of mental illness will not necessarily reduce stigma in itself. For example, if a medical or genetic model is used to explain the cause of a disorder, this may indeed help to reduce stigma in the form of blame for the disorder, but it may also lead to other stigmatising attitudes and more avoidance behaviour (Rusch et al., 2005; Clement et al., 2013). This may be partly due to the creation of a them-and-us attitude or to making the disorder sound more inevitable in those deemed to be at risk, and hence less treatable. Whilst the current diathesis-stress model tends to see a mixture of genetics and the

environment as causing mental illness, sensitivity is needed to ensure that knowledge provided in educational courses is factual yet balanced, if stigma is to be reduced effectively.

A final important consideration for the role of education is its use within the medical model. The medical model explicitly labels people as mentally ill which by itself may unintentionally contribute to stigma. The 'recovery model' however, reflects the desire to distance from psychiatric conceptualisation of mental health. The development of an educational model to reduce stigma would therefore need to be cautious and consistent with its terminology and labelling.

#### **4.6.2 Protest**

Protest usually refers to strategies that work to address legislative or media-based stigma. For example, the need to print arresting headlines gives newspapers a tendency to report many issues, including mental illness, in a negative light rather than a positive one. Thus, the media could be said to play a role in the formation of public fears regarding some types of mental illness and a biased belief that disorders such as schizophrenia are commonly associated with violence and dangerous people, although statistics show that this is not the case. This view is supported by the findings of the review of newspaper reporting on mental disorder in Chapter 2. Films also tend to portray mental illness in a negative light and this is sometimes the case with advertising, as a result of which stigmatizing views are passed on to consumers, who may use them to form their attitudes and beliefs about mental illness. BASTA has attempted to restore some balance in this area, for example by challenging stigmatizing advertisements in the media and making public calls for action. Using email alerts, BASTA has had a number of such adverts removed, with apologies being made by the companies concerned. BASTA also features such content on its website and requests its removal by use of petitions and direct communications with media officers and press representatives of the organizations (Rusch et al., 2005). Such actions would undoubtedly influence public opinion and help to alleviate some of the negative beliefs surrounding mental illness. However, whilst a continued effort would help to shape generations to come, there is conflicting research in this area. Rusch et al. (2005) suggest that suppression of these stereotypes is the response and that while this may lead to a reduction in negative beliefs and attitudes, it is less likely to replace them with positive ones. Hence, more action is required to improve education



and knowledge about mental illness in order to reduce the stigmatising effects of public views.

With regard to legislative changes, some strategies work to inform and reform the views of decision makers or key power groups (Corrigan et al., 2011) such as the press, housing and legal sectors, in order to enlighten policies (Collins et al., 2012). Corrigan et al. (1999) warn, however, that policy changes designed to favour those with mental illness may lead to resentment about perceived preferential treatment. Thus, whilst policies do need to be in place to guarantee fair treatment in housing, employment and criminal justice, sensitivity is needed to ensure that these changes are implemented in a positive way.

#### **4.6.3 Contact**

Contact with people who are suffering from a mental illness, or have in the past had a mental illness and recovered, has often been regarded as one of the most effective strategies not only to reduce stigma but to improve attitudes in relation to mental disorders (Rusch et al., 2005; Corrigan et al., 2011). The idea of using interpersonal contact to change individual perceptions and intended behaviour is based upon Allport's (1954) contact hypothesis, which suggests that interaction with people from a dissimilar group (in this case, people with mental disorders) can bring about change in stereotypically held attitudes and beliefs about this group. In the 1960s, this hypothesis was applied to mental illness-related stigma by researchers seeking to alleviate negative stereotypical views of people with mental disorders (Link & Cullen, 1986) and it appears that such contact may indeed reduce the level of prejudice towards mental illness sufferers (Byrne, 2001; Desforges et al., 1991).

Strategies that employ contact do this either in the physical sense or indirectly via media such as video or other forms of simulated contact (Collins et al., 2012). A number of techniques have been used to provide contact experiences, including work placements, lectures, presentations, interactive workshops, or simulated contact in the form of short documentaries or films. The idea of contact in stigma reduction strategies is to provide positive experiences of those with mental illness, to challenge existing negative stereotypes about mentally ill people and to demonstrate that it is not uncommon for people with mental illness to be able to function usefully and productively in society.

Recent studies have examined the contact hypothesis in greater depth to test whether contact with mental health service users can indeed positively influence the attitudes of mental healthcare professionals towards mental illness. A majority of these studies have supported the contact hypothesis. For example, Markstrom et al. (2009) explored changes following post-theoretical education and clinical placement amongst a sample of 167 students of mixed healthcare backgrounds at Swedish universities. They report a 'de-stigmatising effect' on the students, possibly linked to their interactions with mentally ill patients or the expertise of their supervisors.

Tan et al (2005) examined attitudes to mental illness and psychiatry in a sample of 48 fourth-year medical undergraduates in Malaysia. Post training, attitudes to both mental illness and psychiatry improved significantly, indicating that clinical exposure could play a productive role in altering negative attitudes. In two other studies of changes in attitude towards mental illness in nursing students, favourable results were also reported. A clerkship in psychiatry based in Greece was found to have influenced a sample of 92 students, whose views about mental illness became less authoritarian and discriminatory and rather more positive in terms of the social integration of people with mental disorders (Madinou et al., 2005). Similarly, a six-day psychiatric training course in Japan improved the attitudes of a sample (n=76) of nursing students (Yamauchi et al., 2011).

In contrast to the abundance of literature in support of the contact hypothesis, a few studies have reported negative, contradictory or inconclusive results (Callaghan et al., 1997; Arkar et al., 1997), suggesting the need for further research before making generalisations. In one particular study in Hong Kong, Callaghan et al. (1997) looked at whether previous contact with a person suffering from a mental illness affected the attitudes of Chinese student nurses towards mental illness. They found no significant such effect; although the sample had positive attitudes to general issues related to mental illness, this was not the case when they were questioned on specific topics, which might affect their daily lives. These findings contradict the contact hypothesis (Callaghan et al., 1997). Corrigan and Penn (1999) suggest that in order for contact to be constructive, there must be equality of status between the stigmatisers and those stigmatised, which it may not always be possible to ensure.

Research results indicating cross-cultural inconsistencies in attitudes and stigma amongst medical and nursing students in the field of mental health lead one to infer that the

problem may lie in educational curricula and traditional methods of teaching. According to the recommendations of the UK General Medical Council (GMC) (1993), a major change that was to be implemented during the 1990s was a reduction in the theoretical component of training, in order to enable students to cultivate and master specific areas of interest within the field of medicine. In line with these recommendations, a number of universities and colleges condensed their psychiatric theoretical attachment component from eight to six weeks. They also introduced new teaching styles, such as self-directed learning (Singh et al., 1998), which made the programmes more interactive and engaging for students, in comparison to traditional didactic methods of teaching via lectures. In a comparative study at the Nottingham Medical School, Singh et al. (1998) assessed both methods and found that students receiving the new form of teaching developed a more positive conception of psychiatric interventions and described client contact as rewarding.

Looking at comparative studies where contact has been a component alongside education, Rusch et al. (2005) report that contact has often been one of the integral factors leading to improved attitudes regarding mental illness. It is now commonly accepted that direct contact may be the key component in producing positive attitude change (Corrigan et al., 2003), with more consistently successful results than simulated contact such as video (Corrigan et al., 2012), as well as faring better over time than the education and protest strategies (Yamauchi et al., 2011). However, more long-term research is needed in this domain, as the literature has been inconsistent, particularly with regard to video-based simulated contact, where some studies have failed to demonstrate lasting attitude changes despite some short-term improvements (Hackler, 2011). The difference may lie in the content and the way contact is presented. For example, interventions vary with regard to the type of role the 'contact' person plays, such as that of a factual speaker delivering an educational course, or of someone discussing personal experiences (in person or in a video), perhaps relating to periods of illness, stigma or recovery.

In addition, Rusch et al. (2005) note the importance of the challenge to the stereotype being moderate enough to be realistic, so as not to make the contact person seem like an exception rather than part of the rule. Contact experiences may also need to be positive to have the most benefit; for example, it could be hypothesized that a negative contact experience in a psychiatric ward would not positively affect perceptions of mentally ill people, whilst an everyday positive interaction might well do so. The emphasis with the

contact hypothesis is thus on providing contact with an equal who has a mental illness, yet is also a fully functioning member of society. In some cases, this involves contact with people who have suffered from a mental illness, then recovered and decided to share their experiences, the ideal scenario for contact being one of positive engagement and interaction. With regard to simulated contact, it has been argued that the most beneficial may be 'first person narratives', where the contact person is able to share first-hand experiences with the viewer (Clement et al., 2013).

#### **4.6.4 Combined approaches**

Many interventions now combine aspects of two or more of the above approaches, often including education and contact with service users or ex-service users who may be able to dispel certain myths about mental illness or offer their perspectives on the issue of stigma (Collins et al., 2012). There appear to be differences in susceptibility to change with regard to age and strategy, whereby contact was found to be more useful at improving adult attitudes to stigma, for example, whereas younger people benefited more from educational intervention (Corrigan et al., 2012).

Whilst each of the three approaches has its own merits, a multidimensional approach is often considered the best option for producing positive change (Hornick, 2002). As stigma happens at a number of levels, in society at large, in healthcare establishments and among individuals, reduction strategies will be most beneficial if they challenge beliefs and attitudes across all of these levels. Hornick (2002) presents a case study relating to smoking rates in the USA, where a high-profile informational advertising campaign led to changes in public attitudes to the acceptability of smoking. This campaign led to a change in the norms associated with smoking, although the resultant drop in smoking figures was initially not very large. However, this shift in attitudes to smoking was considered to have played a role in subsequent policy changes and these in turn, combined with the media campaign and changing public opinion, affected smokers and led to greater change.

Applying this to mental disorder-related stigma research, it is predicted that a multicomponent approach to stigma reduction would be of the greatest value. This type of challenge to attitudes and beliefs in society, as well as within mental health institutions, would thus attempt to address a combination of the key issues that have been highlighted in producing positive change to mental health stigma. Rusch and colleagues (2005)

suggest that the most beneficial effects were seen when educational interventions were combined with other methods, particularly contact, suggesting that these are both very important parts of stigma reduction. However, they also note that this reduction should be combined with media efforts and mental health campaigns.

In a review of 22 studies, all of which were RCTs assessing mass media attempts to reduce stigma, with a combined participant pool of almost 4500 people, Clement and colleagues (2013) highlight the need for better methodologies, assessing stigma and attitude change across more subgroups of people and in more countries with varying economic backgrounds. Whilst all of the studies reviewed assessed prejudice, the negative views behind intolerance, very few adequately assessed discrimination, the unfavourable intended behaviours that lead to the ill treatment of mentally ill people in society. In addition, very few studies assessed long-term effects with an adequate number of intervals (three or more measures over time) and although many looked at interventions with adults, particularly students, very few addressed whether stigma reduction techniques worked with adolescents or 'power groups' such as recruiters, who can have a considerable impact on the future of stigma. There was also little research assessing the impact of stigma reduction techniques on healthcare professionals. Despite these shortcomings of the body of research, Clement and colleagues (2013) feel able to conclude that whereas the most important factor for positive change appeared to be contact in the form of first person narratives, multicomponent studies were more likely to produce outcomes than those with only one component, suggesting that stigma reduction may need a multidimensional approach.

Rusch and colleagues (2005) rightly argue that more must be done to understand stigma, in particular how it affects different types of mental illness, self-stigmatisation, self-esteem and the impact on families, in order to better reduce its impact. They also discuss the importance of research to ascertain whether psychotherapy may be beneficial in reducing the negative impact of stigma in service users. Similarly, Corrigan and Penn (1999) assert that more must be done to discover which stigma reduction techniques work best and with which target populations, in order to provide effective, lasting and context-sensitive ways to reduce mental health stigmatisation. The present study investigates the impact of contact with inpatients on stigma among student nurses. Corrigan's model,

discussed in Section 2.4, suggests that this form of contact may not be ideal to reduce the nurses' mental disorder-related stigma, because it does not occur in a real-life setting.

#### **4.6.5 Summary of theories and strategies for reducing mental disorder-related stigma**

Education is the key to improving knowledge and the literature reviewed suggests that interventions focusing on enhancing education can reduce prejudice and improve intended behaviour. It was thought that the delivery of education could defeat myths about mental illness, such as the belief that it is incurable. The use of 'mental illness' as an umbrella term for a wide range of complex disorders was also discussed as a factor involved in increasing stigma. It was noted that the term gave little consideration to the type or severity of illness and that this played a role in the poor understanding underlying stigma.

Protest includes challenging media depictions of illness; studies suggest that such efforts could lead to public apologies and media action in some cases. As to protest aimed at changes in legislation and policy, however, the literature suggests that such changes would need to be addressed in a positive light, in order to avoid the public perception of favouritism towards those with mental illness.

Contact with those suffering from mental health issues (or service users) was considered to be the most important and beneficial approach to reducing stigma. The contact hypothesis was shown to suggest that interactive contact or simulated contact using video would reduce stigma. However, it was considered that the type of contact was important, with positive encounters needed, whether in person or virtual. Research highlighted the need for service users in the role of educators or sharing their personal experiences of stigma and mental illness. It also found that evidence of real-life functioning in roles such as working or studying would be more beneficial than inpatient contact. Some research recommended interventions where service users would offer their own views and challenge myths, which also would allow for greater equality of status between the service user and the attendees, as this was considered optimal for stigma reduction.

Finally, research suggests that a multicomponent approach to stigma reduction could be particularly beneficial. For example, interventions that focused on each of the three aforementioned aspects of stigma reduction could be the most useful in terms of outcomes

of intended behaviour. A number of studies were found to have trialled interventions, varying in length from hours to weeks, with components such as videos, lectures, talks, focus groups and presentations. However, relatively few had applied comprehensive measures of knowledge, attitudes and intended behaviour, or had considered these at two or more points in time. It was found that many studies had not considered the direct experience of stigma and mental illness, relying instead on the conceptual literature. This lack of service user input and the paucity of studies focusing on dual diagnoses or comorbidities were two factors supporting the contention that there had been insufficient high quality studies of interventions to reduce stigma.

#### **4.7 Summary and implications for the present study**

The theories presented within this chapter offer broad information that builds and expands on the findings of the Arab contextual review (Chapter 2) to show when and how stigma develops, and how it can manifest. This provides insight into how it could be countered and the sort of content an educational intervention may benefit from having.

The theories proposed by Corrigan stress the importance of increasing knowledge but drawing in personal contact to cement positively changing perspectives towards those with mental disorders. In considering the three misconceptions commonly held by the public towards people with mental disorders expounded by Cohen and Struening (1962) and Rusch and colleagues (2005), there could be found a resonance to the Arab context findings. This resonance is found in the hindrance of open perspectives towards mental disorders due to authoritarian or paternalistic beliefs that set people with mental disorders apart from ‘normal society’. This is exacerbated by a fear that this same population may present an inherent risk to others due to their condition.

Link and colleagues (1999) and Hinshaw (2006) raise a different angle as their theoretical explanations for stigma consider the perspective and impact on the actual group being stigmatised, rather than those stigmatising. This serves as a reminder to counter the medical model of an educational intervention that, despite seeking to reduce stigmatisation can still inadvertently perpetrate the ‘them and us’ attitude.

Consideration of the implications of the work of Crocker and colleagues (1998) for the present study must acknowledge the stigmatising factors of pervasiveness, ambivalence

and anxiety; the social distress and taboo nature of an uncomfortable topic that prevents discussion and awareness. Thus the very presence of an educational intervention may serve to reduce stigmatisation as it openly and calmly provides space for an honest dialogue.

All of the theories within this chapter feed into the present study but as stated, it is the work of Thornicroft (2006) that has been selected to underpin the theoretical conceptualisation of stigma. Thornicroft's 'problem of three' that considers the attitudes, knowledge and behaviours of a person or society to be interrelated factors leading to, and maintaining stigma towards people with mental disorders, most succinctly provide a foundation for work with healthcare professionals.

Turning now to the strategies proposed to counter stigma, this chapter identified education, protest and contact to be the most commonly used, researched and effective methods. The exploration of the data pertaining to each found merits and challenges within each, concluding that a combined approach was most effective (Rusch et al 2005). As stated, a combined approach was therefore selected for the present study, specifically an educational intervention containing filmed contact content from 'functioning' members of society who have, or had had mental disorders. The caution of the strategists has also been noted, and so the study is an exploration to determine the preliminary effectiveness of an educational tool for trainee healthcare professionals. In addition it will coincide with a practical clinical placement in a mental health hospital, thus enabling the consolidation of the taught component of the intervention to real-life experiences. The nature of the contact and intervention are discussed in the subsequent chapters of this thesis. However, this summary serves to make explicit the theory and strategic approach underpinning this work.

## **4.8 Conclusion**

This chapter has explored various theories attempting to conceptualise stigma and its main constituents: stereotypes, discrimination, prejudice and ignorance. The theories and frameworks reviewed were argued to suffer limitations such as being on an individualistic rather than a structural level, being insufficiently representative and not being based on the experiences of individuals with mental disorders. Strategies to reduce mental disorder-related stigma were also reviewed, focusing on education, protest, contact and



the more promising combined approaches. The following chapter presents a systematic review of health education interventions to reduce mental disorder-related stigma in healthcare professionals and marks the second stage of the development phase of this study.

## **CHAPTER 5**

### **Health education interventions to reduce mental disorder-related stigma in healthcare professionals: Systematic review**

#### **5.1 Introduction**

The purpose of this chapter is to systematically review and critique the available literature on intervention studies, to reduce mental disorder-related stigma in healthcare professionals to inform the design of the intervention developed and tested in the present study. It also identifies gaps in the evidence base of mental disorder-related stigma and informs the design of the intervention developed and tested in the present study. Section 5.2 identifies gaps in the evidence base and provides a rationale for the review. The objectives of this review are presented in Section 5.3, followed by the methods in Section 5.4, which lists the inclusion and exclusion criteria and states the search strategy used to retrieve relevant studies. Section 5.5 presents the results, which are then discussed in Section 5.6. Finally, Section 5.7 considers the limitations of the review and draws implications for the present research study.

#### **5.2 Rationale for conducting this review**

Recently, a number of interventions and campaigns to reduce mental illness-related stigma have appeared worldwide (Kassam et al., 2011). However, few have an explicit theoretical framework and few have been tested in high quality intervention studies which incorporate adequate blinding, randomisation, a control group and follow-up (Dalky, 2012). Furthermore, the effectiveness of such programmes and intervention trials directed exclusively at healthcare professionals (including students) has yet to be reviewed systematically.

A total of six systematic reviews of interventions to reduce mental illness-related stigma have been conducted in the past, three of which (Kolodziej and Johnson, 1996; Holzinger et al., 2008; Schcater et al., 2008) are more than five years old, the other three (Livingston et al., 2011; Clement et al., 2013; Yamaguchi et al., 2013) being more recent. Kolodziej and Johnson (1996) included only interventions, which involved some form of face-to-face social contact with individuals suffering from mental disorders, excluding all other forms of intervention such as educational interventions. Holzinger and colleagues' (2008)

review was limited to searching a single database and that of Schacter and colleagues (2008) included only school-based educational interventions directed at samples of children and adolescents. Livingston and colleagues (2011) reviewed the effectiveness of interventions for reducing stigma related to substance abuse disorders. Although their review included some intervention trials directed at healthcare personnel, once again it was not exclusive to them and the impact of stigma-reducing interventions on health professionals is not reported independently of other samples. Furthermore, the review covers only substance use disorders, excluding all other mental illnesses. Clement and colleagues' (2013) review was directed at members of the public (including children) and focused only on mass-media based interventions, whereas Yamaguchi and colleagues (2013) examined the effectiveness of short-term interventions, the target population being university or college students from all disciplines, rather than specifically healthcare personnel. Although three of the systematic reviews were conducted relatively recently, the cut-off point for inclusion was the year 2009 for both the Livingston and Yamaguchi reviews and 2010 for the Clement review, so that studies reported between 2011 and 2014 have yet to be reviewed.

There is thus a gap in the evidence base on educational intervention trials directed at healthcare personnel, which requires an up-to-date systematic review. The review presented in this chapter includes all types of educational intervention trials presently available and incorporates a component analysis to identify the active ingredients of those interventions, which have been found to be effective in reducing mental health-related stigma among health professionals. The results of the component analysis informed the design of the educational intervention developed and tested in the present study.

### **5.3 Objectives**

The objectives of this systematic literature review are to:

1. Describe and formulate a typology of educational interventions available to reduce mental disorder-related stigma in healthcare professionals
2. Establish the effectiveness of different types of educational interventions in reducing mental disorder-related stigma

3. Conduct a component analysis to identify the characteristics of effective educational interventions to guide the development of the intervention used in the present study.

## 5.4 Methods

### 5.4.1 Criteria for inclusion and exclusion

#### *Types of studies*

Three types of studies are included in this review:

- **Randomised controlled trials**, including cluster trials, which compare either one or more types of educational interventions with a control and whose participants are assigned using a process of random allocation prospectively.
- **Controlled clinical trials** (CCTs), which compare either one or more types of educational interventions with a control and whose participants are assigned using quasi-random allocation methods.
- **Controlled before and after studies** (CBAs), which compare a type of educational intervention at baseline and after against another intervention without randomisation.

Single group studies without a control or a comparison intervention, as well as studies without baseline assessment measurements, are excluded.

The justification for the choice of studies is that RCTs are considered to have the lowest risk of bias of all study designs to determine treatment effectiveness. CCTs and CBAs have also been chosen because whilst more open to bias than RCTs, they are able to answer effectiveness questions, albeit with a lower level of evidence (Vidanapathirana et al., 2009; Yamaguchi et al., 2013). The eligibility criteria are set out in full in Table 5.1.

**Table 5.1** Eligibility criteria

	<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
<b>Population</b>	<ul style="list-style-type: none"> <li>Adults aged 18 years and over.</li> <li>Qualified health professionals, allied health professionals and human service workers (e.g. counsellors, social workers) who provide care or support services to people with mental illnesses (also referred to as service users).</li> <li>Undergraduate, graduate, diploma, postgraduate, college or university healthcare and allied health, psychology, counselling or psychotherapy students.</li> </ul>	<ul style="list-style-type: none"> <li>People diagnosed with a mental illness in the past or present.</li> <li>Studies that do not specify the types of participants or students, or not specifically from healthcare, allied health, psychology, counselling or human services-related degrees (e.g. arts, media).</li> <li>Studies in which the whole sample is members of the general public</li> <li>Studies looking at school-based interventions directed at children or adolescents.</li> </ul>
<b>Interventions</b>	<ul style="list-style-type: none"> <li>Contact conditions (CC): those enabling face-to-face interactions with individuals who have a mental illness.</li> <li>Video-based contact (VC): any media film that portrays people with mental illness.</li> <li>Educational conditions: interventions that are neither CC nor VC, such as PowerPoint lectures.</li> <li>Combined conditions: when the intervention takes the form of a package involving two or more of the above mentioned conditions.</li> </ul> <p><b>Aim:</b> The intervention aims to reduce public/social stigma to mental disorders in general, and/or a specific mental disorder (e.g. schizophrenia), and targets any member of the interdisciplinary healthcare team.</p> <p><b>Content:</b> Any educational intervention to reduce mental health stigma that assesses at least one of the following outcomes: knowledge, attitudes, behaviour or intended behaviour.</p> <p><b>Coverage:</b> Interventions may have been undertaken at international, national, regional or local level. The intervention may be intended for a large-scale (such as, lectures, films, or role-plays) or small-scale audience (such as, one-to-one contact based interventions). The intervention may be conveyed in any form including direct or indirect contact.</p>	<ul style="list-style-type: none"> <li>Neurodevelopmental disorders, e.g. Tourette's, autism.</li> <li>Neurocognitive disorders, e.g. Alzheimer's, Parkinson's.</li> <li>Negative portrayals of mental illness, including violence, criminal activity, deviance, etc.</li> </ul>
<b>Comparison/control</b>	<ul style="list-style-type: none"> <li>Control group (education as usual, no educational intervention)</li> <li>Comparison group (e.g. comparison of two different interventions)</li> </ul>	Single group studies, pre and post studies and cohort studies
<b>Outcomes</b>	Any changes in behaviour, knowledge or attitudes toward mental illness including any of: <ul style="list-style-type: none"> <li>Knowledge,</li> <li>Prejudice (all attitudes towards mental illness),</li> <li>Discrimination (actual and/or intended behaviour)</li> </ul>	Studies with no baseline outcomes
<b>Study design</b>	<ul style="list-style-type: none"> <li>Randomised control trials (pre-test-post-test control/comparison group design), including cluster trials, controlled clinical trials and controlled before and after trials.</li> <li>Non-randomised pre-post controlled trial design.</li> <li>English language.</li> </ul>	<ul style="list-style-type: none"> <li>Non-empirical studies such as reviews, editorials, opinion pieces and commentaries.</li> <li>Pre-post studies with no control or comparison group.</li> <li>Grey (unpublished) literature (e.g. dissertations)</li> </ul>

### *Types of participants*

Participants were workers in the broad range of healthcare professions that make up the interdisciplinary healthcare teams providing care or support services to people with

mental disorders (also referred to as service users). They include health or social care professionals as well as undergraduate, graduate, diploma, postgraduate, college or university students from a variety of health professions. These include but are not limited to nurses, physicians, psychologists, social workers, occupational therapists, public health workers, social workers, pharmacists, public health workers and counsellors.

People diagnosed with a mental disorder in the past or present were excluded because this was likely to influence the existing attitudes, knowledge and behaviour prior to the intervention being conducted. As this was a preliminary exploratory trial it was important to ascertain if the intervention was effective which meant removing variables that could give a false positive response. In addition, studies in which the whole sample comprises members of the general public or consists of individuals with mental illnesses were excluded, as the Cochrane Library has registered reviews covering these areas. Furthermore, studies looking at school-based interventions directed at children or adolescents were excluded because previous systematic reviews, such as that of Schacter and colleagues (2008) have addressed this area. Finally, samples in which the types of participants are described as university or college students (possibly enrolling in psychology courses but not a psychology degree) and not specifically identified as healthcare-related majors were excluded, because another review (Yamaguchi et al. 2013) has focused on such participants.

### ***Types of interventions***

An intervention was included if it met the following eligibility criteria, the first of which was developed as a basis for the interventions to be used within this study:

- The primary aim of the intervention was to reduce stigma towards mental illness/mental disorder/mental health problems and or increase mental health/mental illness/mental disorder awareness and is targeted at any member of the interdisciplinary healthcare team. In this review, mental illness includes all mental disorders in accordance to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (APA, 2013) excluding neurocognitive and neurodevelopmental disorders.
- It is a health education intervention that falls under one of the following broad categories:

- *Contact conditions (CC)*: those enabling face-to-face interactions with individuals who have a mental illness
  - *Video-based contact conditions (VC)*: any media film that portrays people with mental illness
  - *Educational conditions (EC)*: interventions that are neither CC nor VC, such as PowerPoint lectures, pamphlets, etc.
  - *Combined conditions (CoC)*: interventions taking the form of a package or involving two or more of the above conditions; for example, a whole mental health course curriculum.
- The intervention may be intended for a large-scale audience (e.g. lectures, films, role-plays) or a small-scale one (e.g. one-to-one contact-based interventions).
  - The intervention may be delivered in any form, including direct or indirect contact. The content of the intervention can also be of any form, fictional or factual.
  - The comparison for the intervention studied can be a control group, which may be given material with a placebo effect (in no way related to mental illness or stigma) or no intervention at all. Studies that compare one intervention with another are also included, provided that there is a control group or comparator.

### ***Types of outcome measures***

Validated and unvalidated outcome measures are included; however, the use of any unvalidated measures will be reported. The primary outcome measures to be considered are those that assess any changes in behaviour, knowledge or attitudes toward mental illness.

### ***Exclusion criteria***

Unpublished grey data, studies that could not be retrieved through university inter-loan library services or by contacting the author were excluded. Non-empirical studies such as reviews, editorials, opinion pieces and commentaries were also excluded. Single group studies without a control or a comparison intervention, as well as studies without baseline assessment measurements, were excluded.

### 5.4.2 Search strategy

The review is reported in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009). Intervention studies were identified via the following electronic databases:

- *PsycINFO (OvidSP)*, 1806 to August, 2014
- *MEDLINE (OvidSP)*, 1946 to August, 2014
- *CINAHL (EBSCOhost)*, 1981 to August, 2014
- *ERIC (EBSCOhost)*, 1966 to August, 2014
- *ArabPsychNet*, 1954 to August, 2014. This is a database of mostly Arabic (and some English and French) psychology and psychiatry-related articles from the Arab world).

Each of the databases was searched from its earliest date to August, 2014. Searches were limited to studies in Arabic or English directed at human samples. Using the PICOS search strategy (Population, Interventions, Comparison/Control, Outcome, Study design) a combination of key search terms related to ‘stigma’, ‘mental disorder’, ‘health professionals’ and ‘educational interventions’ were generated and used to locate relevant studies. Table 5.1 and Figure 5.1 provide details of the search strategy used for study retrieval. Based on the above inclusion and exclusion criteria, a screening table was developed (Table 5.2).

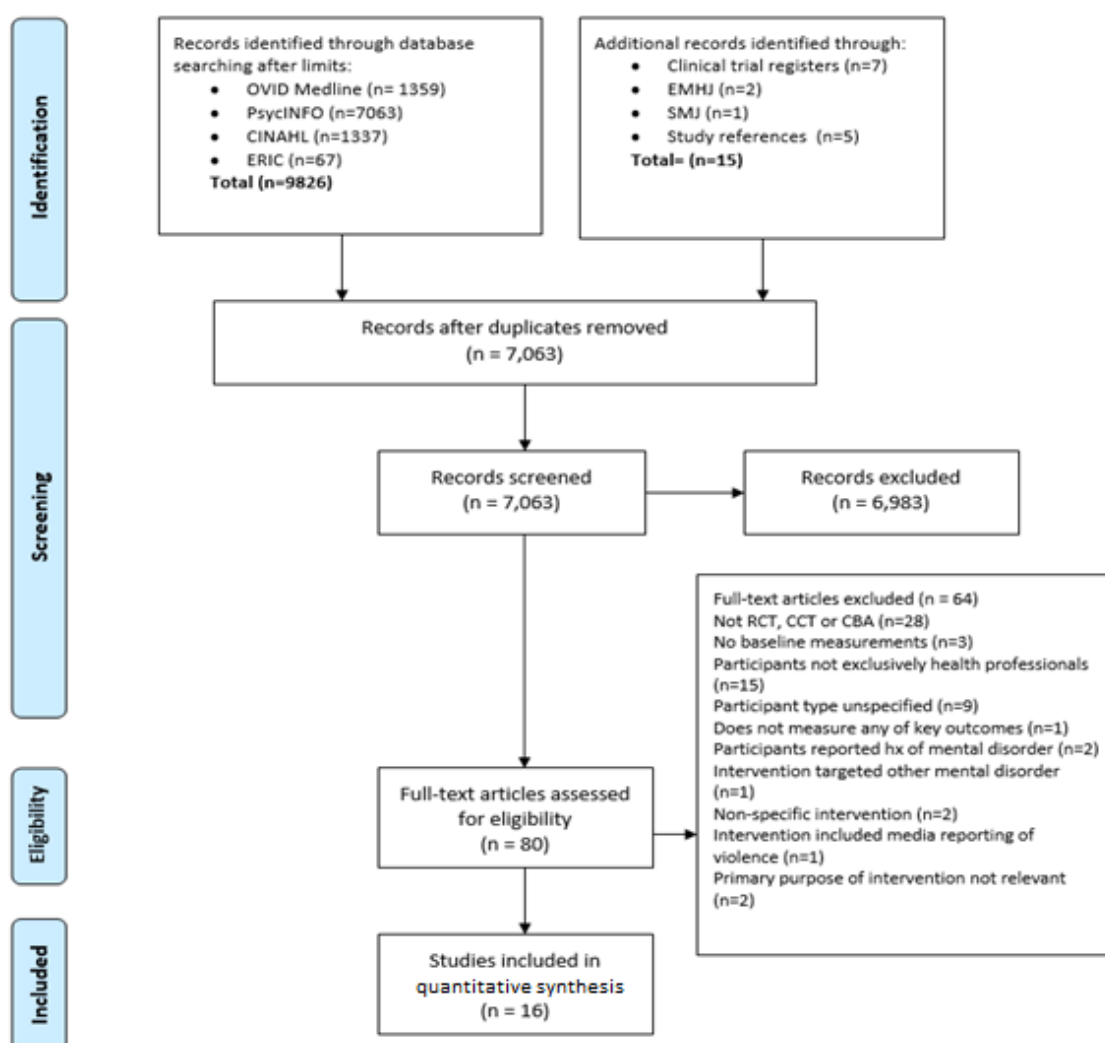
### 5.4.3 Additional sources of studies

Additional publications were also identified by searching through clinical trial registers, including: Cochrane Central Register of Controlled Trials (CENTRAL), United States clinical trials (clinicalTrials.gov), European Union (EU) Clinical Trials Register, current controlled trials, and World Health Organisation (WHO) International Clinical Trials Registry Platform.

Furthermore, hand searches were conducted of the electronic table of content pages of the Eastern Mediterranean Health Journal (EMHJ), from 1995 to present, and the Saudi Medical Journal (SMJ), from 1979 to present. EMHJ is the certified health journal published by the World Health Organization (WHO), which includes research (in both Arabic and English) covering the Eastern Mediterranean region. SMJ is the official open accessed, peer reviewed medical journal that covers all the literature published in the



Kingdom of Saudi Arabia. The reference lists of all relevantly retrieved studies were also reviewed as an additional source of studies.



\* Reason for article exclusion is listed in Appendix 1 of the appendices.

**Figure 5.1** Study flow diagram based on PRISMA guidelines (Moher et al., 2009)

**Table 5.2** Summarised characteristics of included studies

Authors, year & country	Study design	Total sample	Types of Participants	Control /Comparison Group	Intervention Groups	Target Diseases	Duration of Intervention	Follow-Up	Outcomes
Altindag, et al., 2006, Turkey	CCT	60	Medical students	Control with two elements, a lecture about water metabolism & a documentary film, on bird migration.	1 intervention group with lecture, live contact & filmed contact.	Schizophrenia	1-day	1 month	Attitudes, social distance & other information
Clarke et al., 2014, UK	CBA	168	Staff who had contact with patients with personality disorders.	No control (intervention comparison)	Two intervention groups: Acceptance and commitment therapy-based training intervention (ACTr) & Psychoeducation training (PETr)	Personality disorders	2 days	6 month	Attitudes & social distance
Clement et al., 2012, UK	RCT	360	Nursing students	Lecture control covering factual material on stigma & other aspects of mental health but contained no indirect social contact elements.	2 Interventions: filmed contact DVD & live contact	Primarily psychosis	75mins	4-month	Attitudes, knowledge and intended behaviour
Dearing and Steadman, 2008, USA	CCT	116	Nursing students	Control same as experimental group only without voice-simulation experience (VSE) component.	Experimental VSE group	General mental illness	45 mins	Not assessed	Attitudes
Friedrich et al., 2013, UK	RCT	1452	Medical students	Control group did not receive any elements of the Education Not Discrimination (END) intervention they only received their standard medical school curriculum.	END intervention group	General mental illness	Not mentioned	6 month	Attitudes, knowledge & intended behaviour

Authors, year & country	Study design	Total sample	Types of Participants	Control /Comparison Group	Intervention Groups	Target Diseases	Duration of Intervention	Follow-Up	Outcomes
Godejohn et al., 1975, USA	RCT	60	Nursing students	Control with no intervention	2 gaming simulation scenarios	General mental illness	Not mentioned	5 weeks	Attitudes
Hayes et al., 2004, USA	RCT	115	Staff-alcohol & drug abuse counsellors	Educational control of didactic lecture focusing on scientific & biological information about Methamphetamine and ecstasy (MDMA) & resulting drug addiction & treatment	2 groups: Acceptance and Commitment Training (ACT) and Multicultural Training	Not specified	1-day	3-month	Attitudes
Kassam, et al. 2011, UK	CCT	480	Medical students	Control condition did not include any elements of the experimental conditions (EC1) and (EC2).	2 groups: EC1: presentation and personal testimonies by a service user and carer, EC2: Same as EC1 but with role-play as well	Schizoaffective disorder	Approximately 1 hour	Not assessed	Attitudes, Knowledge & Behaviour
Kerby et al., 2008, UK	RCT	82	Medical students	Control group received documentary unrelated to mental illness or psychiatry	The intervention composed of two anti-stigma films	Psychosis, schizophrenia & severe depression	Approximately 25 mins	8-week	Attitudes, Social Distance & other information
Lincoln et al., 2008, Germany	CCT	121	Psychology & medical students	Control group received an information leaflet on glaciers & a video presentation about water molecules & polar ice.	2 groups: biogenetic and psychosocial. Each containing psychoeducational mixed media interventions, brochures and a video	Schizophrenia	Not mentioned	Not assessed	Social Distance, other information
Meng et al., 2007, USA	CCT	117	Medical students	No intervention	1 intervention specialised prenatal clinic for females with addiction disorders (alcohol and substance use)	Addiction - alcoholism & substance use in pregnancy	Half day	4 weeks	Attitudes
Mino et al., 2001, Japan	CCT	189	Medical students	A control lecture (not about mental health)	Educational lecture focused on cross cultural knowledge and a schizophrenia patient case study	General mental illness	1 hour	Following the lecture	Attitudes and social distance

Authors, year & country	Study design	Total sample	Types of Participants	Control /Comparison Group	Intervention Groups	Target Diseases	Duration of Intervention	Follow-Up	Outcomes
Papish et al., 2013, Canada	RCT	111	Medical students	A 4 week mandatory psychiatry course	Contact based educational intervention & a 4 week mandatory psychiatry course	General mental illness	4 weeks vs. 2 hours	3months	Attitudes
Patten et al., 2012, Canada	RCT	74	Pharmacy students	Late group (wait-list) control for T1-T2	Contact-based sessions involving personal testimonies from individuals in recovery from a mental illness	Bipolar, schizophrenia or schizoaffective disorder	Approximately 2 hours	1 month	Attitudes
Ramirez-Cacho et al., 2007, USA	CCT	108	Medical students	Received clerkship in the second 4 weeks (control)	Received clerkship in the first 4 weeks	Addiction - alcoholism & substance use in pregnancy	Half day	4 weeks	Attitudes
Shera and Delva-Tauiliili, 1996, Canada	CCT	63	Social work students	Participants not doing the mental health component, but doing a health component	2 groups - on campus and off campus with 3-part intervention - class, video and interview with severely ill person	Severe mental illness - e.g. schizophrenia, bipolar	Not mentioned	4 weeks	Attitudes

#### **5.4.4 Study selection process**

Studies were identified using the search strategy described above. The studies were filtered to remove duplicates, then screened by title and abstract to exclude those, which were evidently irrelevant to the subject area. Next, the full-text studies were filtered against the eligibility and exclusion criteria. Selection and exclusion of studies were checked independently by my supervisors (Norman and McCrae) prior to extracting data from those included. Figure 5.1 details the study selection process.

#### **5.4.5 Data extraction, management and assessment of risk of bias**

EndNote software was used to store and manage all located studies. Data were then extracted from the included studies into five separate data extraction tables whose design was based on the Cochrane Consumers and Communication Review Group (CCCRG) data extraction template (CCCRG, 2013) with minor adaptations. Extracted data were checked and verified by my supervisors (Norman and McCrae) and any disparities were resolved through discussion. Table 5.2 summarises the main characteristics of the study under the following headings: Study reference and country, design, sample types of participants, control/comparison group, intervention group, target disorder, duration of intervention, follow-up details, theoretical orientation, outcomes. Table 5.3 presents the summarised assessment of study quality and risk of bias, using the Cochrane Collaboration's tool for assessing risk of bias. For a more detailed account, see Appendix 2 of the appendices. The primary researcher extracted all the data independently. Studies found to have methodological flaws that rendered the study data unreliable were excluded from the review. These and other excluded study references are listed in Appendix 3 of the appendices.

**Table 5.3** Summarised study quality and risk of bias assessment

Study	Clarke et al., 2014	Clement et al., 2012	Friedrich et al., 2013	Hayes, 2004	Patten et al., 2012	Papish et al., 2013	Godejohn et al., 1975	Meng et al., 2007	Mino et al., 2001	Ramirez -Cacho et al., 2007	Shera & Delva-Tauiiili, 1996	Kassam et al., 2011	Lincoln et al., 2008	Kerby et al., 2008	Dearing & Steadman, 2008	Altindag et al., 2006
<b>Criteria</b>																
<b>Selection Bias</b>																
<b>1. Random sequence generation</b>	Yes	Yes	Unclear	Yes	Unclear	Unclear	Yes	No	No	No	No	No	No	Unclear	No	No
<b>2. Allocation concealment</b>	Yes	Yes	Unclear	No	Unclear	Unclear	Yes	No	No	No	No	No	No	Yes	No	No
<b>Performance Bias</b>																
<b>3. Blinding of all subjects</b>	Yes	No	No	No	No	No	Unclear	No	No	No	No	Unclear	Unclear	No	No	No
<b>4. Blinding of all educators</b>	Yes	No	No	No	No	No	No	No	No	No	No	Unclear	No	Unclear	No	No
<b>Detection Bias</b>																
<b>5. Blinding of all assessors who measured at least one key outcome</b>	Unclear	No	No	No	No	Yes	No	No	No	No	No	No	No	No	No	No
<b>Attrition Bias</b>																
<b>6. Incomplete outcome data</b>	No	No	Unclear	No	No	No	No	No	No	Unclear	No	No	No	Unclear	No	No
<b>Reporting Bias</b>																
<b>7. Selective reporting</b>	Yes	Unclear	No	No	Yes	Unclear	Unclear	Unclear	Unclear	No	No	Unclear	Unclear	Unclear	Unclear	Unclear
<b>Other Risk of Bias</b>																
<b>Eligibility criteria specified</b>	Yes	Yes	No	No	No	No	Yes	No	No	Yes	Yes	Yes	No	No	No	No
<b>Groups were similar at baseline</b>	No	No	Yes	Not assessed	Yes	No	Unclear	Unclear	Yes	Yes	Yes	No	No	Yes	Yes	Not assessed
<b>Hypothesis/research question of the study clearly described</b>	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Participants of at least two ethnic groups</b>	No	Yes	Yes	No	Yes	Yes	No	No	No	No	No	No	No	No	No	No
<b>Results of between-group comparisons reported for at least one key outcome</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Measures of at least one key outcome obtained from more than 85% of subjects initially allocated to groups</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Both point measures and measures of variability for at least one key outcome are provided</b>	No	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes	No
<b>Research questions/hypotheses clearly answered</b>	Yes	Yes	Yes	Unclear	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

## **5.5 Results**

### **5.5.1 Selection process**

The selection process, as detailed in Figure 5.1, began with database searches, which yielded a total of 9,826 studies:

- *OVID Medline* (1359)
- *PsycINFO* (7063)
- *CINAHL* (1337)
- *ERIC* (67)

A further 15 studies were identified through study references (5), clinical trial registers (7), EMHJ (2) and SMJ (1). After filtering for duplicates, the remaining number of studies for screening was 4,728. Of these, 80 were identified as potentially relevant and full-text copies were obtained. Following further screening, 16 studies were selected as relevant according to the inclusion criteria. All included studies were RCTs (including cluster trials), CCTs or CBA studies that were exclusively carried out with a sample of adult health professionals measuring at least one of the key outcome measures of stigma (attitudes, knowledge and behaviour). All studies had to include baseline measures and a specified intervention.

### **5.5.2 Data extraction and management**

Data from the studies were extracted in line with recommendations from the CCCRG (2013). Each article was summarised for each table, including i) study characteristics, ii) risk of bias, iii) scores and change scores for each of the key outcomes and iv) follow-up.

### **5.5.3 Description of included studies**

All of the included studies were published in English and fulfilled the requirements of the methodology guidelines and inclusion information. The majority were conducted in the USA (5) or the UK (5), followed by Canada (3), Japan (1), Germany (1) and Turkey (1).

Of the 16 studies included in the review, seven were RCTs, eight were CCTs with a control group for comparison and one was a CBA with one or more experimental groups. The studies had a total of 3,676 participants at baseline, all of whom were either practicing healthcare professionals (2 studies), undergraduate medical students (8) or students taking

nursing (3), pharmacy (1), social work (1), or a combined course of medicine and psychology (1).

Of the included studies, five assessed all three outcome measures of interest. Eight studies assessed attitudes alone, whilst four assessed attitudes and behaviour. There were a total of 3,676 participants in the 16 studies that measured attitude outcomes, 2,473 participants in the five that assessed knowledge outcomes and 2,912 participants in the eight that assessed behaviour or intended behaviour outcomes.

Of the eight studies that measured behaviour, seven assessed this using a measure of intended behaviour such as the Social Distance Scale (SDS) (1) or a version of the SDS modified for personality disorder (1), or the Intended Reported and Intended Behaviour Scale (RIBS) (2) or other non-repeating questionnaires to assess social distance (3). One additional study assessed behaviour during a role-play exercise. Two further studies included questions that related to social distance as part of attitude scales, but the outcomes were not assessed separately.

Knowledge was assessed in five of the studies, but the scales used were not uniform across any of them. Instead, a range of non-repeating measures were used to assess knowledge across papers, including the Mental Health Knowledge Schedule (MAKS), plus scales that were specifically constructed for the studies, including the Social Contact Intended Learning Outcomes test (SILCO), the Knowledge Quiz, Casual Beliefs about Schizophrenia Questionnaire and others.

Attitudes were assessed in all 16 studies. Scales that were used included the Opening Minds Survey for Health Care Providers (OMS-HC) (2), the Mental Illness Clinicians' Attitudes Scale (MICA) (2), the Changes in Stigma Attitudes Scale (CAMI) (1), or a specially modified version of this for the target population, e.g. substance users (1), the Bland et al. (2001) attitudes scale for substance use (2), the Attitude to Personality Disorder Questionnaire (APDQ) (1), the Opinions about Mental Illness Scale (OMI) (1) or other questionnaires that were specifically created or adapted for the study (6). Only one study used a range of attitude measures. All used questionnaires as the main assessment methods, apart from one that used an implicit association task to measure attitudes in addition to questionnaire measures of explicit attitudes.



The target illness varied across the studies; however, most focused on general mental illness encompassing a range of disorders such as depression, schizophrenia, anxiety and others (9). The remaining studies focused on single disorders, including schizophrenia (2), schizoaffective disorder (1), psychosis (1), addiction (2) and personality disorder (1).

A range of theoretical orientations was evaluated in the studies. Most commonly, the study methods were based on a combination of the contact hypothesis and education (8); however, some studies looked at the effect of a single approach, such as the contact hypothesis (3), education (1), cognitive change (1), empathy (1) or a comparison of the influence of psychosocial vs. biogenetic knowledge and contact (1). One other study assessed the role of the contact hypothesis in combination with co-operative contact (Desforges et al., 1991).

In terms of interventions, eight studies used more than one method of presentation as part of the intervention. The types of interventions assessed included actual contact with a person with a mental illness (9 studies) and simulated contact in the form of a video (5), while one additional study added video contact as an optional component of the intervention and one other included video, but this was used in both experimental conditions and was not treated as an independent variable or as a basis for comparison on the outcome measures. Eleven studies included an educational component, such as a lecture or presentation (formal or informal), or provided documentation such as a leaflet. Two studies included group discussions. Other intervention methods employed included role-play (2), a game simulation (1) and a virtual simulation exercise where an audio hallucination experience was presented on headphones whilst participants were completing tasks.

The interventions were all short term, ranging in duration from 27 minutes to four weeks. Only two studies included interventions that lasted longer than a week and it was more common that an intervention lasted less than half a day (6) or between a half and two full days (5). Three studies did not specify the exact length of the intervention.

Short-term changes in the outcome measures were assessed in the great majority of studies. Twelve looked at such changes in a follow-up study, whilst the remaining four only assessed the outcome measures for change immediately after the intervention. The post-test follow-up period ranged from 10 days to 6 months post intervention. Across

studies, follow-up was conducted at either 10 days (1), four weeks (3), one month (2), eight weeks (1), three months (2), four months (1) or six months (2).

#### **5.5.4 Experimental design and selected interventions**

##### ***Randomised controlled trials***

The RCTs varied in terms of the intervention types, with four assessing the contact, one looking at simulated video contact (plus an additional study including an optional video contact component), three including lectures or presentations, one including a discussion group and one assessing a gaming simulation intervention. Two of these studies included only one element of these in their intervention and the rest included two or more components in their intervention. The methodology was extremely varied across the papers. One study assessed the contact hypothesis, comparing early contact with the late group (as controls). Contact was supplemented by lectures and tutorials across the period for both groups. Another study assessed two types of educational training, with a control group who received an unrelated lecture. The study that included the most intervention components compared a one-time intervention (two hours of contact, group discussion, teaching and an optional movie night and discussion) with a control group receiving only the compulsory training. Another study (Friedrich et al., 2013) assessed the END intervention, which included a factual lecture relating to stigma and contact with service users, plus role-play workshop, in comparison to controls who received no END component. One study assessed two experimental groups in comparison to controls; the experimental group received video contact or actual contact, both followed by discussion, while in the control group a standard lecture on stigma was presented with no contact element. Another study compared an intervention comprising of two simulated contact videos (15 minutes and 12 minutes), with a control group who watched a video on an unrelated topic (25 minutes). One study assessed a gaming-led intervention followed by group discussion in comparison to a non-gaming control group. Each gamer would play a role that would lead to conflicts between stigmatising attitudes and the game objective.

##### ***Controlled clinical trials***

Eight CCTs were included in the review. Five had a contact component, two had a simulated video contact component and one included such a video but only as part of an educational comparison. Eight studies included a lecture, presentation or information leaflet. One study used a hallucination simulation experience presented on headphones.

The methodology varied greatly between the studies, although two were similar in design and sample, and were carried out in the same setting. These tested the contact hypothesis (early intervention vs. late intervention group as controls). They assessed contact with people with addictions during a half-day study group at a prenatal clinic, introduced with a five-page informative document. Outcomes were assessed in comparison to a control group receiving no intervention.

Two studies combined contact, simulated contact and educational lecture and/or presentation in their interventions. One compared an experimental group, receiving contact, video contact and an education component, with a control group receiving no mental health focus. The other compared an experimental condition, receiving i) a lecture on myths and causes in schizophrenia, ii) a contact session with someone with schizophrenia and iii) an autobiographically orientated anti-stigma film intervention, with a control group receiving an unrelated lecture and watching an unrelated documentary.

Of the three studies that focused on the educational approach in terms of methodology, one assessed a lecture and case study, in comparison to a control lecture not related to mental health. Another incorporated a contact element into this, comparing a contact presentation on stigma presented by a service user, and another experimental group additionally receiving a role-play session with a service user and carer, with a control group receiving no related training. The third had two experimental groups receiving a session that explained mental illness in either biological or genetic terms. The experimental sessions included a leaflet and a case study video; however, this simulated contact was only for the purposes of detailing the educational approach and was not addressed as part of the intervention or framework. These two groups were compared with a control group receiving an unrelated leaflet and watching an unrelated video.

A methodologically unique study involving an empathy framework compared an experimental group who received a virtual simulation experience (VSE) in the form of simulated auditory hallucinations, including voice instructions and noises that were deemed to be distressing, while performing a number of tasks, with a control group who did the tasks but did not listen to the VSE.

### ***Controlled before and after studies***

One CBA study was included in the review. There was more than one component in the intervention, viz. simulated video contact, informal presentation and group discussion. The study compared two groups, each with an education focus: PETr (education) and ACTr (education and video contact).

### **5.5.5 Study quality assessment**

Study quality and the reliability of trial results depends heavily on what measures are employed to reduce areas of possible risk of bias. Therefore, it is crucial that systematic reviews consider the risk of bias of all included studies (Higgins et al., 2011). In this review, the quality of each study was assessed using the Cochrane Collaboration's tool for assessing the risk of bias (Table 5.3).

Each study was rated in terms of how each criterion was met and scores were attributed according to how likely bias was. If reporting was unclear as to whether or not the optimum practice guidelines had been met, this was in itself deemed to present a moderate risk of bias. The potential for bias was scored against the 15 criteria detailed below and each study was allocated a risk of bias score accordingly. When risk of bias was likely for one of the 15 items, the study scored one bias point, whereas it scored zero if the bias had been remedied. If there was unclear information relating to an item in the study, a bias score of 0.5 was given for that item.

### ***Selection bias***

Selection bias refers to the differences in characteristics amongst groups as compared at baseline, which is likely to occur due to poor randomisation techniques, particularly in terms of sequence generation and allocation concealment (Higgins and Green, 2008). Sequence generation refers to the element of chance or randomness used to generate the allocation sequence, such as coin tossing or the throwing of dice, whereas allocation concealment refers to the stringency of the sequence adhered to in order to maintain unpredictability or randomness when allocating participants to study groups; for example, allocation by the use of sequentially numbered, opaque, sealed envelopes.

Selection bias appeared to be an area of particular risk across all studies. Authorities suggest that selection bias can be reduced by the use of random sequence generation to allocate participants, and allocation concealment once participants are placed into

conditions. However, these combined methods of selection bias reduction were used in only three of the 16 studies (Clarke et al., 2014; Clement et al., 2012 and Godejohn et al., 1975), meaning that only these three met the optimal criteria on this bias indicator. One other study (Hayes, 2004) employed allocation concealment but not random sequence generation. Four studies were unclear about their use of random sequence generation and eight presented high risk on the basis of the information given about this. Three studies were unclear about allocation concealment, while nine presented as high risk for bias in relation to this. In combination, this meant that 12 studies either were unclear about their inclusion of these components or did not factor them into the study design, leading to a high likelihood of selection bias in the data overall. Allocation concealment was marginally more of an issue in the sample than random sequence generation, and this area could have benefited from clearer reporting.

### ***Performance and detection bias***

Performance bias refers to differences between groups in exposure other than those of interest, whereas detection bias refers to differences between groups in determining the outcomes (Higgins and Green, 2008). Both performance and detection bias have to do with blinding or masking the participants or personnel delivering the intervention and the outcome assessors respectively.

Inadequate blinding, or lack thereof, posed the greatest risk of bias to the studies collectively, as scores for bias were higher here than for other quality control criteria. This presented a risk in every study and would have led to both performance bias and outcome detection bias. In terms of performance bias, blinding of all participants and all educators was enforced in only one study (Clarke et al., 2014), and even this study fell short of a remedy due to unclear reporting of whether there was blinding of all assessors measuring at least one key outcome variable, leading to a risk of detection bias. Three studies were not clear in explaining whether or not participants were blinded, and the remaining 12 were deemed at risk due to lack of participant blinding. Thirteen studies were deemed at risk of bias due to a lack of blinding of educators, while two others were not clear on whether blinding of educators had taken place. A large reliance on self-report measures in the research area also influenced the likelihood of performance and detection bias. Not a single study was deemed risk-free in terms of blinding the assessment of one of at least one of the key outcome measures. This meant that there was not only a

considerable risk of performance bias due to participant and educator knowledge of the conditions, but also a risk of detection bias due to experimenter expectancy. This indicates that lack of blinding poses a considerable threat to the quality of studies in this area.

### ***Attrition bias***

Attrition bias refers to differences between groups due to the loss of participants, for example by withdrawal (Higgins and Green, 2008). Attrition represents a risk of bias because the reasons for withdrawing might be related to the intervention itself or to its outcome, thus making outcome data incomplete and biased.

Attrition bias posed one of the greatest threats to the reliability of the study sample in that every study had dropouts or failed to report their presence/absence: three studies presented unclear information on withdrawals and the remaining 13 all had such withdrawals. Because withdrawal may not be a random occurrence, this is problematic in multiple time-point studies, particularly those with longer follow-up periods. Clearer reporting in some studies might have helped to determine whether complete samples were included in all outcome measures. However, when assessed in relation to the outcome measures and the proportion of participants that were still present at the end time point of the studies, all studies met the 85% or above criteria for completing participants. This suggests that while withdrawal is a problem and there is a risk of incomplete outcome data in the studies collectively and individually, none was severely affected by a large reduction in sample size due to attrition.

### ***Reporting bias***

Reporting bias refers to differences between reported and unreported findings, leading to selective reporting; for example, reporting of only statistically significant differences between study groups (Higgins and Green, 2008).

Selective reporting occurred in four studies in the sample; however, this low figure was not representative of the quality of reporting measures. It was unclear whether reporting bias was present in a majority of studies, 10 in total, meaning that only two were comprehensive in their reporting. The lack of clarity was related to a lack of protocol reporting to assess whether data had been omitted, and for some studies measures were not reported in detail, with all measures of central tendency and dispersion, or data were missing for one or more time points. The inclusion of ethics outlines, data or full reporting

of all materials would have been sufficient to remedy a lack of clarity in relation to selective reporting; however, this was a problem in the sample overall.

### ***Other types of bias***

One strength across the sample of studies was that all except one (Hayes et al., 2004) clearly detailed the hypotheses and answered the questions posed with the results. In addition, the results of between-group comparisons were made for all studies on at least one of the key outcomes and, as aforementioned, completers in all the studies were 85% or more of the sample at baseline. Providing measures of variability for at least one key outcome measures at all time points represented a moderate risk, with five studies failing to provide these measures. In relation to other potential types of bias, the collection of studies was less than adequate. Only six studies presented eligibility criteria in detail, while the remaining studies lacked information about this. Seven studies compared groups that were similar at baseline, but this was not the case for another seven, while it was unclear in the remaining two. However, the most serious additional risk of bias was the failure to test multicultural samples of more than 50 participants. It is deemed optimal to assess participants from two or more ethnic groups, but this was not a feature of the large majority of studies.

While they were not optimal in terms of design, the studies by Clarke and colleagues (2014), Clement and colleagues (2012), Patten and colleagues (2012) and Kerby and colleagues (2008) presented the lowest risk of bias in the sample, featuring six or fewer potential bias risks in their study designs and reporting. There was a high risk of bias in the studies by Altindag and colleagues (2006), Hayes and colleagues (2004), Mino and colleagues (2001), Lincoln and colleagues (2008), Shera and Delva-Tauiliili (1996) and Meng and colleagues (2007), with nine or more bias-related issues.

### **5.5.6 Effects of interventions**

#### ***Comparison 1: Any intervention compared with inactive controls***

All interventions in the RCTs produced significant improvements on their key outcome measures, apart from one, which was a purely education-based intervention (Hayes et al., 2004). All studies that featured either live contact, simulated contact or another component such as group discussion or a gaming experience produced positive outcomes on their assessed measures across one or more time-point measures. Across 13 outcome measures assessed in seven studies, 12 outcomes had significantly improved at from

baseline to post, or had performed more favourably than controls at one or more time-point measures.

All interventions in the CCTs produced significant improvements on at least one of their key outcome measures. Across 12 outcome measures assessed in eight studies, nine outcomes had significantly improved from baseline to post intervention, or had performed more favourably than controls at one or more time-point measures.

#### *Attitudes towards people with mental illness*

Fifteen studies assessed attitudes in comparison to an inactive control group. Twelve of these found clear improvements in stigma-related attitude scores post intervention.

All seven RCTs assessed attitudes pre and post intervention and all reported significant improvements on at least one measure of attitudes in at least one experimental group in comparison to controls. Initially, one study did not find significant differences between any time-point measures, but after adjusting for a number of factors there was a highly significant effect. In Clement and colleagues' (2012) study, attitudes significantly improved in comparison to the lecture control group for both intervention groups ( $p<0.01$ ), scores on the MICA scale being 1.9 points lower in these groups. Regressions on the MICA scores demonstrated that the live contact condition and the simulated contact conditions had a positive effect ( $p<0.05$ ). In Friedrich and colleagues' (2013) study, two of the three attitude measures assessed showed an improvement as a result of the END multicomponent intervention (live contact, education lecture and role-play session). The intervention led to a less stigmatising response to statements such as 'There is something about people with mental illness that makes it easy to tell them from normal people' ( $p<0.05$ ) and 'It is frightening to think of people with mental problems living in residential neighbourhoods' ( $p<0.05$ ). In Godejohn and colleagues' (1975) study, above average scores on the OMI attitudes scale (with less favourable stigmatising attitudes) were randomly assigned to conditions. There was a highly significant reduction in stigmatising attitudes from baseline to post intervention ( $p<0.001$ ). The intervention consisted of a game simulation that required role-play, conducted in a group setting where each player took a complete turn, followed by a discussion about that turn. The control group, receiving no intervention, did not show a significant change in attitudes between the two time-points. Hayes and colleagues' (2004) study compared two education-based interventions with controls that received a lecture on addictions and their treatments with



no stigma component. Stigmatising attitudes improved for those who took part in the multicultural training intervention in comparison to controls ( $p<0.05$ ), but the other experimental intervention did not produce this beneficial effect. Kerby and colleagues (2008) found a reduction in stigmatising attitudes as a result of the simulated contact intervention (anti-stigma films) from baseline to follow up ( $p<0.01$ ) and over all three time-point assessments ( $p<0.05$ ). Patten and colleagues (2012) report that a live contact intervention led to improved attitudes when comparing scores with the late intervention group as controls ( $p<0.05$ ), and this was verified with the use of regressions to determine the effect of the condition ( $p<0.05$ ). In the study by Papish and colleagues (2012), the assessment of attitude was assessed alongside intended behaviour scores using a single 20-item scale. Initially, attitudes did not significantly differ between groups across time-point measures, but when adjustments were made, a highly significant effect emerged ( $p<.001$ ) once age, sex and career focus choices were controlled for. This study featured a multi-component intervention, including live contact, educational aspects and discussion, plus an optional simulated contact ‘movie night’ and group discussion.

Attitudes were assessed in all eight of the CCT studies. Five showed improvements in stigma-related attitudes and two found no significant improvement following intervention, although one of these (Ramirez-Cacho et al., 2007) did report a positive improvement in attitudes to mental illness in social life. One study found a significant effect for intervention with regard to explicit stereotypes but not implicit measures (Lincoln et al. 2008).

The intervention in Altindag and colleagues’ (2006) study comprised live contact with someone with schizophrenia, a simulated contact component in the form of an anti-stigma film and a lecture, which led to a significant attitude change in relation to items assessing ‘beliefs about the aetiology of schizophrenia’ and ‘care and management of people with schizophrenia’ ( $p<0.05$ ). Mino and colleagues (2001) assessed an educational lecture intervention that featured a case study as part of the material and found a significant difference from baseline to post intervention for seven of the eleven attitude questionnaire items ( $p<0.001$  for three items,  $p=0.001$ ,  $p=0.003$ ,  $p=0.034$ ,  $p=0.016$ ) but no significant change was observed for the control group. They also found a significant improvement on three of the nine additional attitude scale items ( $p=0.0001$ – $p=0.014$ ) and two of six items assessing human rights attitudes to mentally ill persons ( $p=0.005$ – $p=0.011$ ) in

comparison to no significant change in the control condition. The study by Shera and Delva-Tauiili (1996) assessed a multi-component intervention including live contact that featured interviews with service users severely ill with either schizophrenia or depression, a simulated contact video called Changing Roles, focusing on a group of people with mental health issues who formed a StigmaBusters group, plus a class session. They found a significant difference post intervention for the conditions in terms of attitudes ( $p < 0.01$ ) that persisted after controlling for differences in initial attitude scores ( $p < 0.05$ ). There were also highly significant pre-post intervention attitude scores for the experimental condition ( $p < 0.001$ ) but not the control group.

Two studies assessed an intervention that was clerkship led and dealt with addiction, particularly attitudes to treating pregnant women with alcoholism in a dedicated prenatal addiction clinic. Their objective was to increase 'comfort levels' in relation to medical students' ability to ask important questions about alcohol or addiction. In the first (Meng et al., 2007) the half-day clerkship was supervised by two professionals and supplemented with an educational leaflet. Results demonstrated that in comparison to late intervention controls, participants had improved patient blame scores ( $p < 0.01$ ), viewed Alcoholics Anonymous to be more important ( $p < 0.05$ ), believed physicians were more useful in helping with alcohol abuse ( $p < 0.05$ ) and believed group therapy was beneficial ( $p < 0.05$ ). Both the intervention and control groups believed that alcohol abuse was less of a medical problem than a legal or moral one, but the intervention group were significantly less inclined to this view than controls ( $p < 0.05$ ). Ramirez-Cacho and colleagues (2007) employed the same methodology in their study, but found a significant improvement in only one of the 16 items on attitude measures, suggesting that the intervention had not been very beneficial. However, the one item that did improve was 'tolerance to treat' ( $p < 0.05$ ) and an additional measure assessing confidence to treat patients with substance misuse effectively as counsellors.

Using a virtual simulation experience that simulated auditory hallucinations as an intervention, the study by Dearing and Steadman (2008) found post-intervention scores on the Medical Condition Regard Scale highly significantly improved for the experimental group on six items ( $p < 0.001$ ), with significant improvement on a further three attitude item measures ( $p < 0.05$ ). However, improvements were also noted for the control group, with highly significant improvements on five items ( $p < 0.001$ ) and

significant improvement on a further three items ( $p < .05$ ). The authors note that personal growth in the experimental condition was achieved through improved insight as a result of the task. Although the VSE component was not presented to the control group, it may have been that the focus group following up thoughts in relation to the shared components of the study (sign up at the clinical location and orientation tasks) was not as benign in improving attitudes as would be expected from a control condition.

Lincoln and colleagues (2008) assessed two different educational approaches to mental illness, either biogenetical or cognitive, with two groups, comprising medical and psychology students. The interventions had a simulated contact component in the form of video. They found a significant effect of time (pre-post), suggesting that the interventions had led to reduced explicit stereotype measures ( $p < 0.001$ ). There was also a significant difference between the interventions in improving these scores ( $p < 0.001$ ). However, a lack of clarity in reporting meant that it was difficult to ascertain an overall statistical view of the data if groups were combined.

Kassam and colleagues (2011) compared two interventions with controls. One intervention comprised a live contact session with a service user and carer and a presentation, whilst the second featured both components plus a role-play session with the carer and service user. This study found no significant difference in attitudes pre and post the two interventions in comparison to controls.

### *Knowledge*

Knowledge was assessed in just two of the seven RCT studies, both of which found significant improvements in knowledge on the basis of the intervention. Clement and colleagues (2012) found a significant improvement in both intervention groups separately (simulated filmed contact via DVD and live contact) in comparison to the lecture control condition, suggesting that both had improved knowledge outcomes ( $p < 0.05$ ). In addition, Friedrich and colleagues (2013) found a significant improvement in stigma-related knowledge in the intervention condition in comparison to the control group ( $p < 0.01$ ). In this study, the END programme was a multicomponent intervention that included a lecture about discrimination and stigma, a live contact component and role-play sessions for participants and instructors.

Knowledge was assessed in two CCTs, both finding a significant improvement in scores post intervention. Kassam and colleagues (2011) report a significant improvement in knowledge as a result of the intervention ( $p<0.001$ ). Altindag and colleagues (2006) assessed knowledge in combination with the attitude scales, which were significantly improved as a result of the intervention ( $p<0.05$ ).

#### *Social distance/behavioural intentions*

Behaviour and/or social distance were assessed in four of the RCTs. A favourable and significant improvement was detected in three of the studies, with the remaining one initially not finding significant differences between any time-point measures; however, after adjustments for a number of factors there was a highly significant effect. Clement and colleagues (2012) found a significant improvement in RIBS scores in both the experimental groups (live contact and simulated contact via DVD) in comparison to the control lecture group ( $p<0.05$ , adjusted  $p<0.01$ ). The multicomponent END intervention in the Friedrich and colleagues (2012) study also led to improvements in the RIBS score in comparison to the control group ( $p=0.01$ ). Kerby and colleagues (2008) found that the simulated contact intervention led to a highly significant improvement in social distance scores from baseline to post intervention ( $p<0.0001$ ) and across all time points ( $p<0.0001$ ). In Papish and colleagues' (2012) study, intended behaviour was assessed in combination with attitude scores using a single 20-item scale. After controlling for age, sex and career focus choices, the researchers found that their multicomponent intervention led to highly significant improvements in social distance scores ( $p<0.001$ ).

Behaviour was assessed in six of the CCTs, with four showing significant improvements as a result of the intervention. Altindag and colleagues (2006) assessed knowledge in combination with the attitudes scale and found that attitudes improved in relation to 'social distance to people with schizophrenia' ( $p<0.05$ ). For the two studies that focused on alcoholism in a prenatal clinic (Ramirez-Cacho et al., 2007; Meng et al., 2007), there were improved intended behaviour scores, in particular comfort levels, asking important questions about addictions and arranging referrals ( $p<0.001$ ). Mino and colleagues (2001) demonstrated improved intended behaviour towards people with mental illness scores on a number of social distance items such as 'accepting as co-worker', 'to rent a room' and 'children's marriage to' ( $p<0.05$ ). Kassam and colleagues (2008) found no significant difference between pre and post test scores on the behavioural measures. Finally, Lincoln

and colleagues (2007) report their outcomes selectively and it is not clear how behaviour was affected by the interventions.

### ***Comparison 2: Any intervention compared with any other intervention***

One CBA study (Clarke et al., 2014) assessed two outcome measures, with significant improvements being reported for two of these. This study employed a mix of intervention components and compared an educational intervention condition with at least one other condition involving contact or simulated contact.

#### *Attitudes toward people with mental illness*

Clarke and colleagues (2014) found a significant difference between pre and post intervention scores when comparing an educational intervention with another comprising education plus simulated contact via video. Negative attitudes decreased post intervention ( $p < 0.001$ ) and were still reduced at six months follow-up ( $p < 0.05$ ).

#### *Knowledge*

Knowledge was not assessed in this study.

#### *Social distance/behavioural intentions*

Clarke and colleagues (2014) found that there was a significant improvement in social distance scores post intervention ( $p < 0.05$ ), but that there was no significant difference between the interventions.

## **5.6 Discussion**

### **5.6.1 Synthesis 1: Effectiveness of interventions – common components**

All studies that demonstrated significant improvements on one or more of the outcome measures employed: either a contact component, a simulated contact component, group discussion or a novel method such as a gaming experience (Table 5.4).

The most successful studies appeared to use a combination of intervention methods. The findings suggest that education alone may not be sufficient in producing positive outcomes during brief interventions and that something over and above academic delivery was needed to engage additional thinking about stigma and related negative behaviours. However, the fact that not all studies which included such components produced beneficial results on the outcome measures indicates that it is not simply a case of

including a contact or simulated contact component; as well as the light the ‘contact’ person was presented in, there are likely to have been a number of factors that varied among the reviewed articles, other than those mentioned in this review. These include but are not limited to the enthusiasm with which interventions were presented, the length of their delivery, their ability to be replicated and finally the way outcome variables were measured. Promising new methods are also worth considering here, including role-play-based gaming techniques and virtual hallucination experiences, which may need further evaluation in follow-up studies.

**Table 5.4** Summary of intervention conditions, components, theoretical basis and target

	Intervention conditions					Intervention components													Theoretical basis		Target of intervention		
						Filmed personal testimonies	Feature film depicting person with mental disorder	Control film not related to mental disorders	Lecture by mental health professional	Lecture by person with mental disorder	Group discussion	Role-play	Guided specific exercises	Live contact (personal testimonies)	Gaming simulation	Voice simulation	Clerkship/ psychiatric rotation	Reading material e.g. leaflets or articles	I	E	A	K	B
	C.C	V.C	E.C	O.C	Co.C																		
Altindag, et al., 2006	✓	✓	✓	×	✓	×	✓	✓	✓	×	✓	×	×	✓	×	×	×	×	✓	×	✓	✓	✓
Clarke et al., 2014	×	✓	✓	✓	✓	✓	×	×	✓	×	✓	×	✓	×	×	×	×	×	✓	×	✓	×	✓
Clement et al., 2012	✓	✓	×	×	✓	✓	×	×	✓	×	✓	×	×	✓	×	×	×	×	×	✓	✓	✓	✓
Dearing and Steadman, 2008	×	×	×	✓	×	×	×	×	×	×	✓	×	×	×	×	✓	×	×	✓	×	✓	×	×
Friedrich et al., 2013	✓	×	✓	×	✓	×	×	×	✓	×	×	✓	×	✓	×	×	×	×	×	✓	✓	✓	✓
Godejohn et al., 1975	×	×	×	✓	×	×	×	×	×	×	×	×	×	×	✓	×	×	×	×	✓	✓	×	×
Hayes et al., 2004	×	×	✓	×	×	×	×	×	✓	×	✓	×	✓	×	×	×	×	×	✓	×	✓	×	×
Kassam, et al., 2011	✓	×	✓	✓	✓	×	×	×	✓	×	✓	✓	×	✓	×	×	×	×	✓	×	✓	✓	✓
Kerby et al., 2008	×	✓	×	×	×	✓	×	✓	×	×	×	×	×	×	×	×	×	×	✓	×	✓	×	✓
Lincoln et al. 2008	×	✓	✓	×	✓	✓	×	✓	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	✓
Meng et al., 2007	✓	×	✓	×	✓	×	×	×	×	×	×	×	×	✓	×	×	✓	✓	✓	×	✓	×	×
Mino et al., 2001	×	×	✓	×	×	×	×	×	✓	×	×	×	×	×	×	×	×	×	✓	×	✓	×	✓
Papish et al., 2013	✓	✓	✓	✓	✓	×	✓	×	✓	✓	✓	×	×	✓	×	×	✓	×	✓	×	✓	×	×
Patten et al., 2012	✓	×	×	×	×	×	×	×	✓	×	✓	×	×	✓	×	×	×	×	×	✓	✓	×	✓
Ramirez-Cacho et al., 2007	✓	×	✓	×	✓	×	×	×	×	×	×	×	×	✓	×	×	✓	✓	✓	×	✓	×	×
Shera and Delva-Taullili, 1996	✓	✓	✓	×	✓	✓	×	×	×	×	✓	×	×	✓	×	×	✓	✓	×	✓	✓	×	×

**Intervention conditions:** Contact condition (CC), Video-based contact condition (VC), Educational condition (EC), Other condition (OC), Combined condition (CoC.); **Theoretical basis:** Implicitly (I) or Explicitly (E) mentioned; **Target of intervention:** Attitudes (A), Knowledge (K), Behaviour (B)

### **5.6.2 Synthesis 2: Types of mental disorder amenable to stigma reduction techniques**

Whilst the majority of studies focused on combined mental disorders, such as schizophrenia, bipolar depression and mental disorders in general, two studies investigated addiction. The reports of research studies in the published literature were not sufficiently detailed to ascertain the impact of stigma reduction interventions on specific types of mental disorder in detail, although potential benefits were seen across a number of studies. These included those targeting mental disorders in general and schizophrenia, both of which were more commonly targeted than other categories of disorder. The results of intervention studies targeting addiction were inconclusive, as one of the studies demonstrated positive improvements in intended behaviour and attitudes, while the other failed to find such an improvement with the same type of intervention. Nevertheless, the results of the studies reviewed demonstrate for the most part that the stigma associated with a range of mental disorders could be reduced by stigma reduction interventions, which seek to improve knowledge, attitudes or behaviour (or intended behaviour). However, the most effective protocol for achieving disorder-specific stigma reduction was not clear. Furthermore, the severity of mental disorder symptoms varied in the studies, making it difficult to determine how attitudes and intended behaviour might vary depending on the range of symptoms experienced.

## **5.7 Limitations**

This review was limited to English and Arabic, and to published studies, trial registers, and conference papers; it is noteworthy that publication bias may mean that unpublished studies on similar interventions differ greatly from those that were published and hence available for screening.

In terms of the limitations of the papers reviewed, bias was probable in all of the studies, as none was wholly compliant with bias reduction techniques outlined in the Cochrane tool. One of the major limitations across the studies was the use of varied tools for assessing the key outcomes, few of which had been tested for validity and reliability; thus, even similar interventions could not be compared consistently to achieve a more precise estimate of intervention effect. The majority of studies attempted to address stigma reduction techniques, focusing on mental disorders in general without specification. Whilst this was not true of all studies, it is likely to have impacted the use of materials



for the interventions that would be expected to cover a large range of material, such as facts used to rectify myths. This would mean that while stigma was being addressed, many specific disorder-related types of stigma could have been overlooked, for example the incorrect belief that men cannot develop eating disorders, or that people with bipolar disorder are simply being ‘moody’ or having ‘mood swings’ rather than suffering with a serious illness. Where educational interventions were included, the theoretical focus of the causal factors highlighted in these interventions was not adequately detailed across studies.

Stigma-reducing interventions included in this review were very varied in terms of choice components, length of intervention and how and by whom they were delivered. In addition, the various delivery components employed (e.g. contact, virtual contact, education or other methods) made evaluating each component for merit difficult. For example, treating ‘contact’ in an intervention as a holistic construct has low validity when some studies focus on co-operative contact, such as group work with a person who has a mental disorder, while in others contact is combined with education; for example, where a person who has recovered from a mental disorder delivers a lecture.

## **5.8 Implications for future research**

Future research in this area would benefit from greater use of randomised controlled trials across the board so increasing confidence in cause and effect relationships experienced. This also means that studies that did not include a suitable control could be replicated with a non-intervention group to determine the usefulness of the interventions compared. In addition, a non-active control group can be a useful measure of change brought about by the intervention as it controls for any extraneous variations not directly resulting from the intervention.

In terms of bias, it is recommended that future research would be improved by taking note of bias reduction techniques as outlined by Cochrane, in order to improve the validity of findings. With regard to the assessment of knowledge, attitudes and behaviour, it is recommended that future research should make use of some of the better known and pre-validated measures of these constructs, even if this is supplemented with additional measures that are created for the purpose of assessing the intervention in more detail. It

is expected that with a more uniform approach to assessment across this research domain, interventions can be more reliably compared and assessed for their impact.

In terms of choice components selected in the interventions, it would be ideal for future studies to take note that this review found multicomponent methods to be apparently the most beneficial (Clement et al, 2012; Kassam et al, 2011). However, more focussed studies are needed in order to ascertain aspects of each component that are useful for reducing stigmatising attitudes, whilst improving behaviour and knowledge. Although there is evidence in the literature that the use of contact (Patten et al 2012), virtual contact (Kerby et al 2008), education (Mino et al 2001) or other novel methods such as voice simulation (Dearing & Steadman, 2008) or gaming simulation (Godejohn et al 1975), have all been shown to affect the key outcome measures, methodological differences are so diverse that more research is needed. Thus, it is not simply a case of including ‘contact’ or ‘education’ in an intervention, as theoretical frameworks would suggest; the methods by which they are included should be assessed in more detail. For example, it would be useful for a contact study to look at how contact is included as a variable across interventions, comparing these to non-intervention controls. Such a study could assess co-operative contact, contact with a recovered former service user, contact with a current service user or contact in combination with education, perhaps where current or former service users could deliver educational components of an intervention. In addition, the educational components included need more consideration in terms of the theoretical model they adopt to deliver ‘knowledge’. As beliefs about the cause of a disorder have been shown to affect attitudes, it could be recommended that future educational methods attempt to include considerations of the cognitive model in comparison to the biological model of educational intervention components. Similarly, the type of virtual interventions could be considered; for example, a comparison study of film, short film, documentary and video interviews could explore the type of interaction that is best in a virtual contact intervention study, the goal being to ascertain the best stigma-reduction techniques and behavioural and knowledge enhancers that can be delivered in the shortest amount of time during an intervention.

While there was a general focus on mental disorder across the studies, there were some that attempted to look at one disorder in detail, and whilst this may be limiting in terms of a short intervention, the benefits of delivering a highly specific intervention may be

greater in a work setting. As a result, it can be recommended that interventions focus on specific disorders as a variable in order to establish the best methods for each disorder. Notwithstanding the considerable promise of the research considered herein, the focus for studies on stigma interventions should be on the rigour of their methodology, to raise the quality of research in this domain. With stricter controls, greater attention to reducing bias and the use of standardised measures of knowledge, attitudes and behaviour, a consensus regarding potential stigma-reducing interventions may be close at hand.

## **5.9 Summary**

The review found that although knowledge was a theme and educational components were delivered as part of the interventions reported in the literature, there was little assessment of knowledge as an outcome, representing a specific gap in the literature. When knowledge was assessed, non-repeating tests or questionnaires were used, suggesting a lack of uniform or validated diagnostic tools for the assessment of understanding as an outcome in mental illness research.

By contrast, attitude was assessed as an outcome measure in the majority of studies and in all RCTs. All except one of the studies addressed the assessment of attitudes using explicit measures, most commonly the OMS or MICA scales. Furthermore, a majority of studies assessed at least one measure of social distance or behavioural intentions, most commonly with the Social Distance Scale, suggesting that attitudes and discriminatory behaviours were most often the target of stigma reduction interventions.

In terms of the effectiveness of different types of educational intervention, on the whole the interventions had led to a reduction in negative attitudes towards people with mental illness. However, in line with the conclusions of the theoretical exploration, it was considered that there was an overall lack of high quality studies. Bias was reported for each study in line with the Cochrane collaboration tool for assessing risk of bias, alongside analysis of study information extracted with recommendations from the CCCRG (2013).

Bias was scored against 15 criteria as part of the Cochrane guidelines, and none of the studies could have been considered without risk. Selection bias was commonly observed due to poor randomisation techniques or lack of clarity about the techniques, whilst lack of blinding or allocation concealment for the educator or participants posed the greatest

risk of bias to the studies collectively. There was also a failure to address outcomes in multicultural samples of 50 or more participants, as this was not featured in the large majority of the studies. Attrition bias was another issue, but this was a relatively low risk despite a number of participant withdrawals, with studies still meeting the 85% completer sample guidelines.

With regard to identifying the characteristics of successful educational interventions, the most successful appeared to use a combination of components. All but one of the successful RCTs included contact as a component. Furthermore, all of the studies that produced significant improvements included either contact, simulated contact or group discussion and novel methods of intervention such as role play or simulated hallucinatory experiences. It was apparent that academic presentation alone did not have the greatest impact, and although a large majority of the studies that included contact alone did have significantly beneficial outcomes, this was not the case for all. It was considered that multicomponent interventions would be the most effective in reducing stigma. The contact studies varied in their delivery and included video contact, co-operative activities, contact via a fictional film, clerkships and clinical placements. It was noted that the light in which contact participants were portrayed could be important here, in line with theoretical considerations from Chapter 4. Education was delivered using leaflets, presentations or video and varied as to whether knowledge of the causes of mental illness was presented as being cognitive or biomedical. Other factors, which might have affected the results, included the length of the interventions, which varied greatly, with the majority lasting less than a week; there were also differences in the severity and types of disorders addressed and in the enthusiasm with which the interventions were delivered. The interventions were not all replicable and the measurement of outcome variables were not standardised; hence it was not clear which components would provide the most effective reduction of stigma. It was concluded that the methodological differences were so vast that more research would be needed to determine the effectiveness of individual components.

## **5.10 Conclusion**

This chapter has presented the second stage of the development phase of the MRC framework for the development and evaluation of complex interventions undertaken within the present study. This systematic review concluded that a combined approach to

an educational intervention using filmed content with a contact component was likely to produce the greatest effect on stigma reduction. Although the review was inconclusive as to if interventions should focus on a single mental disorder or a range, the decision was taken to include general information on a range of disorders. This was because the nursing students are novices, unlikely to have prior knowledge of mental disorders and yet likely to witness a range of conditions during their clinical placements. These findings are applied in the following chapter that contains the third and final stage of the development phase: modelling and usability testing of the intervention prototype.

## **CHAPTER 6**

### **Modelling and usability testing of the intervention prototype**

#### **6.1 Introduction**

This chapter reports the modelling and usability testing of the film-based contact intervention and demonstrates the shift in the overall study from the theoretical towards modelling in the development phase. Section 6.2 presents the aim and specific objectives of this stage of the study. Section 6.3 introduces the application of the MRC framework and lists the three main parts of the development phase in relation to the modelling of the film-based contact intervention to reduce mental disorder-related stigma. Section 6.4 discusses the identification and development of appropriate theory, building upon the findings of the theoretical exploration presented in Chapter 4, as applied to the modelling phase of this study. Section 6.5 next considers the identification of the evidence base, building upon the findings of the systematic review of educational interventions discussed in Chapter 5, then Section 6.6 discusses the modelling process and outcomes, presenting the steps used to model and build the intervention prototype and to test and refine the intervention. The chapter concludes with Section 6.7, which summarises the implications of the development phase in preparation for the pilot testing of the intervention in the feasibility/piloting phase of the study, to be discussed in Chapter 7.

#### **6.2 Aim and objectives**

The aim of this stage of the study was to model, build, test and refine the intervention prototype that was to be tested in the exploratory trial as part of the feasibility/piloting phase of the overall study. The specific objectives were to:

1. Model the intervention prototype design, based on the findings of the theoretical exploration of the generation and maintenance of stigma and on iterative consultation with the expert advisory group
2. Incorporate into the building of the intervention prototype the active components related to content, design and mode of transmission found in the systematic review of interventions to reduce stigma

3. Test the intervention prototype for usability and acceptance among a similar target end-user sample
4. Refine and optimise the intervention prototype based on similar target end users' experiences.

### **6.3 Overview of development phase methods**

Chapter 3 critiqued complex interventions and explained the rationale for the use of one in this study. This chapter deals with the modelling and building of such an intervention: the development phase. Complex interventions are commonly used as improvements to health services, ultimately to improve patient care, in one of four forms: as direct interventions at the level of individual patient care, as organisational or service modifications, as interventions targeted at the health professional, or as interventions delivered at a population level (Campbell et al., 2000).

The complex intervention developed in this study takes the third form, as it is an intervention targeting healthcare professionals (Saudi student nurses specifically) with the ultimate goal being a reduction in their stigmatising knowledge, attitudes and behaviour towards people with mental disorders. Three main parts of the MRC guidance on developing and evaluating complex interventions (Craig et al., 2008) fall within the development phase of a complex intervention:

- Part 1: Identifying/developing appropriate theory
- Part 2: Identifying the evidence base
- Part 3: Modelling process and outcomes

The following sections discuss each of these elements and how they relate to this study.

### **6.4 Part 1: Identifying/developing appropriate theory**

#### **6.4.1 Methods of identifying theory**

To understand and develop appropriate theory, a theoretical exploration of the underpinnings of stigma in relation to mental disorders was carried out (Chapter 4). This helped the researcher to understand the generation and maintenance of stigma. The researcher was able to explore the theories and stigma reduction strategies available, and attended a course on stigma and discrimination at the Institute of Psychiatry, King's

College London. This course offered a background on conceptual frameworks behind stigma in relation to mental illness and presented new developments in the field of stigma research. The course also allowed the researcher to network with other professionals in the field and to discuss concerns regarding mental disorder-related stigma in the Arab world.

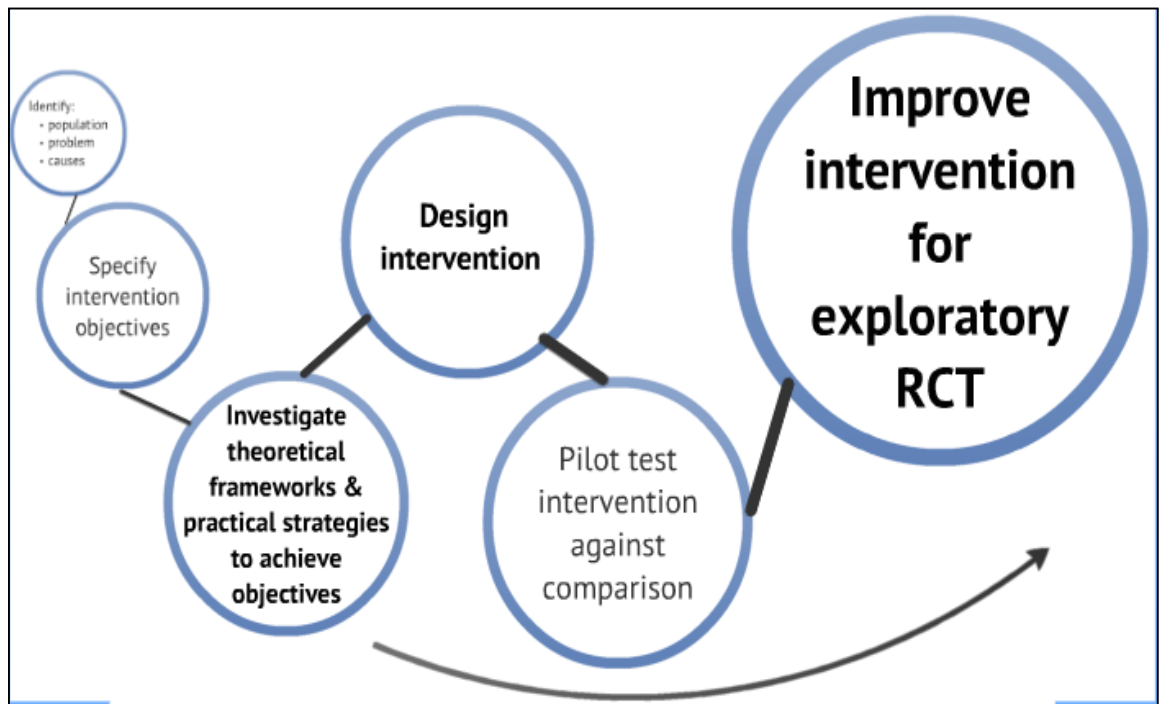
#### **6.4.2 Contextualising the theory**

Most of the conceptualisations of stigma presented in Chapter 4 were those of the Western world; the researcher found the literature to be lacking in terms of certain cultural aspects specific to the Arab world, particularly Saudi Arabia, where this study took place. A contextual review of mental disorder-related stigma as represented within popular Saudi culture was therefore conducted (reported in Chapter 2) and this helped the researcher to identify culturally specific themes and to develop a culturally sensitive educational intervention prototype. This contextual review, while not included as part of the MRC framework applied to this study, helped to inform the various stages of the study's conduct by providing contextual information to ensure that the intervention was applicable to the setting. The review was conducted concurrently with the development of the intervention, and the final version presented in Chapter 2 contains the most recent and pertinent data. Its presentation so early in the thesis is intended to provide the reader with vital cultural information regarding how mental disorder-related stigma is exhibited and understood within the Arab world, specifically Saudi Arabia.

#### **6.4.3 Mapping the theory to the process of intervention development**

Learning from the above, the researcher was able to map out a plan of action for the development of the complex intervention to be tested in this study (Figure 6.1).





**Figure 6.1** Mapping the development stages of the intervention

The mapping process involved six stages:

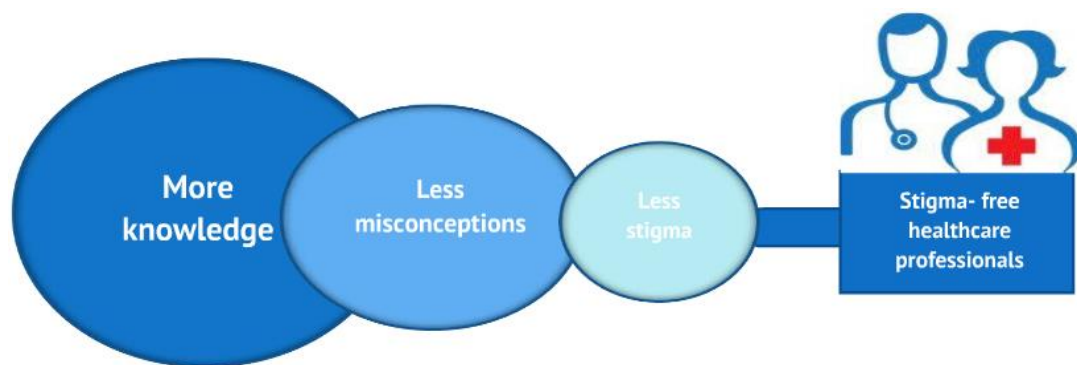
- The first was the identification of the research problem (mental disorder-related stigma), the research population (Saudi nursing students) and the underlying causes of the research problem (attitudes, knowledge and behaviour).
- The second stage was to specify the intervention objectives in order to provide a structure and focus for the research study. The mapping process then led to:
- The third, fourth and fifth stages (the development phase of the MRC framework) which are discussed within this chapter. Although these stages stand alone, they overlap to a certain degree, as the information contained within each feeds into the others (as explained in Chapter 3, Figure 3.3).
- The sixth and final stage was born out of the preceding five stages and the exploratory RCT, presented in Chapter 7. Stage six is identified by the MRC framework as the feasibility/piloting phase.

#### **6.4.4 Selecting the theoretical framework for the research (Stage 3 of mapping)**

The researcher identified the problem to be studied as mental disorder-related stigma caused by a threefold problem of attitudes, behaviour and knowledge among nursing students in Saudi Arabia. The researcher's overall aim was thus to develop and compare

against a comparison condition an educational intervention that would increase knowledge and influence attitudes and behaviour towards people with mental disorders, thereby reducing stigma.

Of all the stigma conceptualisations reviewed, Thornicroft's (2006) was the only one that included the element of education, which the researcher believed to be important to the development of an educational intervention, as illustrated by Figure 6.2. Therefore, the researcher chose to build upon Thornicroft's conceptualisation of stigma (seen as a threefold problem of attitudes leading to prejudice, behaviour leading to discrimination and knowledge leading to ignorance), because his ethos on stigma mapped closest to the overall aim and objectives of this study. A further point to acknowledge about Figure 6.2 below is that the process of reducing stigma is more often iterative than linear; the model serves to demonstrate the stages involved and emphasises the desirable end result, rather than presenting a prescriptive process.



**Figure 6.2** Influence of knowledge on mental disorder-related stigma

#### **6.4.5 Practical conceptualisation of intervention design (Stages 3 & 4 of mapping)**

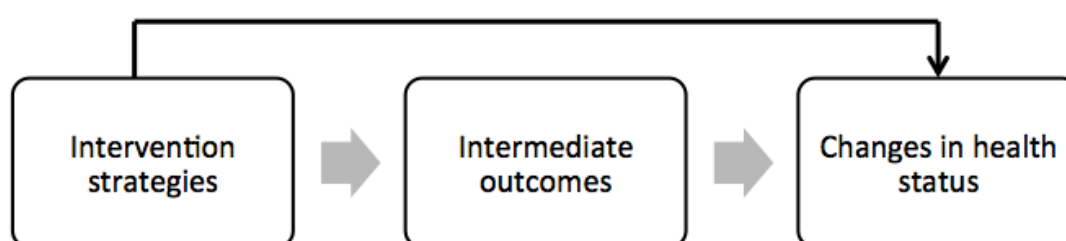
Many interventions that reduce mental disorder-related stigma are reported in the literature, as discussed in Chapter 5. However, most authors do not explicitly discuss the theoretical basis upon which they were developed. Contrary to these studies, the educational intervention developed for this study was built in line with Thornicroft's (2006) conceptualisation of stigma and Steckler's (1995) model of the relationship of intervention to outcome, first referenced in Chapter 3.

This study defines 'health education intervention' in accordance with the following conceptualisation by Green and Kreuter (1991):

Organized health education activity intervenes the process of development and change so as to maintain, enhance, or interrupt a behavior pattern or condition of living that is linked to improved health... The behavior of interest is usually that of the people whose health is in question (mental health service users in the context of this review)... Equally important in the process of planning and developing the policies and programs are the behaviors of those who control resources or rewards, such as... health professionals (p.22).

The application of this definition to the present study is found in the presentation of the educational conditions (the filmed DVD intervention and its comparative PowerPoint [PPT] lecture condition) against ‘usual education practice’ within an existing education programme, whereby stigma reduction is the target of the educational intervention.

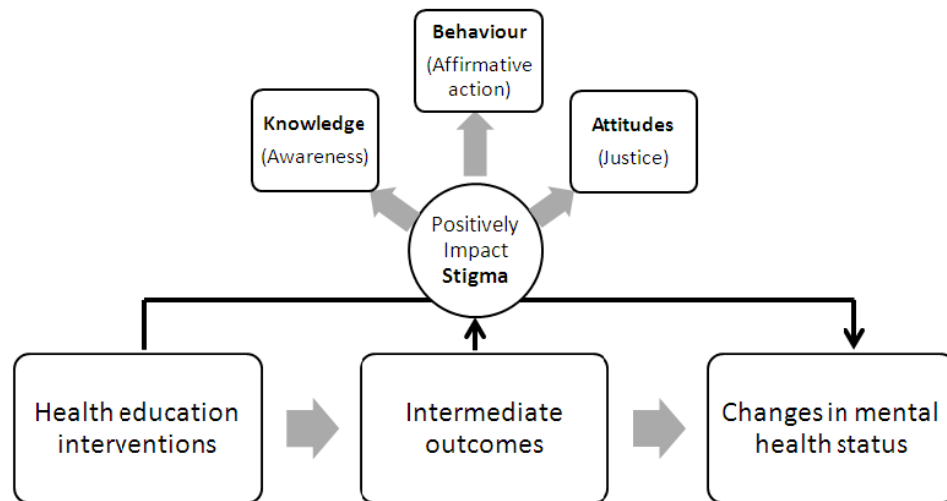
Steckler et al. (1995) developed an operational model to illustrate the connection between interventions and outcomes (Figure 6.3). According to them, the overall aim of health education interventions is to influence health status positively, which is best reflected via changes in intermediate outcomes such as knowledge, behaviour or attitudes that in turn bring about ‘identifiable and measurable’ changes in health status (Steckler et al. 1995).



**Figure 6.3** The relationship of intervention to outcome

Adapting Steckler’s model and incorporating Thornicroft’s conceptualisation ensures that within the context of this study, health status refers to changes in nursing students’ understanding of mental health. Specifically, this study focuses on the intermediate outcomes of the health education strategies, which have a positive impact on all or any of the following: knowledge, behaviour and attitudes in healthcare professionals.

A conceptual framework to exemplify the overlapping relationship between the work of Thornicroft and Steckler has been developed and is presented in Figure 6.4 to demonstrate its application to this research study.



**Figure 6.4** The overlap between Thornicroft’s conceptualisation of stigma as a problem of three, and Steckler’s model of the relationship of intervention to outcome

While Thornicroft’s theory explores the negative outcomes and processes of stigma formation, the conceptual framework shown in Figure 6.4 deals with the reversal of negative perceptions. Therefore, the threefold problem of attitude, behaviour and knowledge has been reversed to demonstrate their potential impact when stigma is lessened or reversed. Thus, ‘ignorance’ (knowledge) becomes ‘awareness’; ‘prejudice’ (attitudes) becomes ‘justice’; and ‘discrimination’ (behaviour) becomes ‘affirmative action’. The relationship and application of these three elements within this research study then fits within Steckler’s model, as the specifically crafted and targeted health education intervention influences the student nurses. It is important to acknowledge that this research study does not claim to measure or monitor impact on the mental health status of patients, as it is concerned only with student nurses. However, it does serve as preliminary and foundational work that will lead to future work including this element.

## 6.5 Part 2: Identifying the evidence base

To identify the evidence base behind interventions that reduce mental disorder-related stigma among nurses, a systematic review of studies of healthcare workers was commenced (Chapter 5) at the start of the development phase of this study, then routinely updated during the feasibility/piloting phase. The review helped to identify the common types of interventions that have been used to influence stigma in the form of attitudes, behaviour or knowledge, and their active components. It also captured the outcome measures, which were used to assess the effectiveness of the interventions and these helped to determine the outcome measures of choice for this study.

The review found that studies containing specific aspects of five key factors were more effective than those without. The researcher drew on these factors, explored below, in the design of the intervention for this study.

**Theoretical underpinning:** The review found evidence for the assertion that stigma-reducing interventions should be grounded in a theoretical underpinning which is made explicit. Studies that clearly demonstrated the theory informing the intervention were better able to explore and apply their findings practically.

**Research design:** The review was limited to studies using one of three types of study design for reducing stigma in healthcare professionals: RCTs, CCTs and CBA studies. Of these three, the review recommended using RCTs, as being most effective and with the least bias.

**Mode of delivery:** A range of methods was used to deliver the educational content across the interventions:

- *Contact conditions (CC):* those enabling face-to-face interactions with individuals who have a mental disorder
- *Video-based contact conditions (VC):* any media film that portrays people with a mental disorder
- *Educational conditions (EC):* interventions that are neither CC nor VC, such as PowerPoint lectures or pamphlets
- *Combined conditions (CoC):* interventions in the form of a package or involving two or more of the above conditions; for example, a whole mental health course curriculum.

Interventions that used CoC were found to be more effective in stigma-reducing outcome measures. In addition, these had a longer lasting impact on the same outcome measure on follow-up.

**Topic of content:** The review revealed that studies geared towards a multiplicity of mental disorders were more effective in eliciting changes in attitudes, behaviour and knowledge among healthcare professionals. There has been a tendency to focus on individual conditions, but the review found meagre effectiveness for such approaches. Given the general misconceptions regarding mental disorders, the review recommends

that interventions include education on a range of disorders, rather than a disorder-specific approach.

**Outcome measures:** All studies included in the review monitored outcome measures, recording changes in attitudes, but not all recorded changes in behaviour and knowledge, nor were all of the tools used to monitor outcome measures validated. The lack of consistency, specifically in the use of standardised measures, made it difficult for the review to offer any clear recommendations beyond the inclusion of validated outcome measurement tools in subsequent studies.

The intervention prototype was informed by the recommendations of the systematic review outlined above. The theoretical underpinning, as discussed in Section 6.4.5 of this chapter, was grounded in the work of Thornicroft and Steckler. The prototype used an exploratory RCT to frame the intervention with the intention of conducting a definitive RCT based on the findings of this study. Although the review recommends using a CoC approach, the mode of delivery for the health education intervention was VC, as this was early exploratory work whose purpose was to determine the effectiveness of the filmed contact intervention from the perspective of service users. This was compared to education as usual (PowerPoint lectures) delivered by mental health module leaders. This decision is discussed later in the context of the limitations of the study. The content of the filmed intervention covered a range of mental disorders, as per the recommendations of the systematic review.

The prototype intervention outcome measures were attitudes, knowledge and intended behaviour towards individuals with mental disorders. These were assessed using:

- The Mental Illness Clinician's Attitudes (MICA) scale
- The Knowledge About Mental Illness Quiz (SCILO)
- The Reported Intended Behaviour Scale (RIBS)

These measures are discussed in greater detail in Chapter 7. The systematic review was inconclusive regarding which outcome measures to use in this type of research. However, one of the intervention studies conducted by Thornicroft and colleagues (Clement et al., 2012) had several similarities to this research study, including the student group under investigation and the mode of delivery of the intervention. The adaptation of Thornicroft's conceptualisation of attitudes, knowledge and behaviour to stigma already

discussed in this chapter, combined with the relationship between his study and the research of this project, suggested that it would be circumspect to use the same validated outcome measures. The usability testing of this intervention enabled a degree of face validity for the applicability of these outcome measures to this research.

## **6.6 Part 3: Modelling process and outcomes**

Part 3 was a complex process that incorporated several stages, some of them iterative. Therefore, for clarity, an overview of the following subsections is provided here:

- **Building the prototype (6.6.1)**
  - Guidelines informing the building of the intervention prototype
  - Building the intervention prototype with input from an expert advisory group
- **Usability testing of the intervention prototype (6.6.2)**
  - Testing the face validity of the components
  - Reviewing the feedback and the refining process

### **6.6.1 Building the prototype**

#### ***Guidelines informing the intervention prototype***

The modelling stage of a complex intervention is important, as it provides essential information regarding the overall design of the intervention. The MRC new guidance recommends that researchers refer to a formal framework that tests complex interventions as a guide to help with the modelling phase. In line with the MRC recommendations, the researcher referred to the National Institute for Health and Care Excellence (NICE) health guidance on the development and evaluation of behaviour change interventions at population and individual levels (National Institute for Health and Care Excellence, 2007). Within this guidance, the following is emphasised with regard to the planning and design of an intervention which is intended to bring about change in behaviour: Be specific about content; identify what is being done to whom and how; clarify which theories are used to link actions to outcomes.

#### ***Building the intervention prototype with input from an expert advisory group***

Two steps in the iterative process of building the intervention prototype were collaborative consultation with an expert panel and submission to peer healthcare professionals for review and feedback. These form an important part of the refinement

process, because members of the Expert Advisory Group (EAG) had significant expertise in the topic area of mental health and e-learning. Their expertise ranged from being leaders in the field of stigma and mental health research to creating and implementing educational interventions. Hence, the EAG, whose members are listed in Table 6.2, was consulted to review, inform and reach consensus on key intervention elements. The peer review group comprised a nurse, a psychologist, a health educator and two psychiatrists, all of whom had an Arab background.

**Table 6.1** Expert advisory group consulted in the modelling of the educational intervention

<b>Name</b>	<b>Area of expertise</b>	<b>Academic affiliation</b>
Professor Ian Norman	Stigma and mental health	Vice Dean and Professor of Mental Health at Florence Nightingale School of Nursing and Midwifery, King's College London, UK
Dr Sarah Clement	Stigma and mental health	Lecturer and senior researcher at the Health Service and Population Research department, Institute of Psychiatry, Psychology and Neuroscience, King's College London
Dr Niall McCrae	Mental health	Lecturer in Mental Health Nursing at Florence Nightingale School of Nursing and Midwifery
Dr Hala Al Sayes	Mental health	Mental health lecturer at the Nursing department, College of Applied Medical Sciences, King Abdul-Aziz University, Jeddah, Saudi Arabia
Dr Sanaa Hibshi	Mental health	Mental health lecturer at the Nursing department, College of Applied Medical Sciences, King Abdul-Aziz University
Mr Riaz Toorabally	E-learning	Learning technologist at Florence Nightingale School of Nursing and Midwifery

The iterative review process was conducted three times, before the expert advisory group and peer review healthcare professionals gave their approval for the intervention to be tested for usability. Table 6.2 summarises the progression of development of the intervention, showing the members of the panel and review group involved at each stage and the recommended changes. The development, review and refinement process is detailed in the sections below providing more detail on the role of the EAG.



**Table 6.2** Iterative review process as informed by the Expert Advisory Group (EAG)

<b>Film version</b>	<b>Date</b>	<b>Length in minutes</b>	<b>Reviewers</b>	<b>Number of scenes</b>	<b>Comments</b>
Version 1	November 2011	75	Mental health specialist	17	Needs shortening and Arabic material
Version 2	December 2011	60	E-learning technologist Peer review: five healthcare members	17	Needs shortening, scene dividers, introduction and concluding scenes
Version 3	December 2011	50	Mental health specialist	19	Approval given
Version 3	December 2011	50	Mental health specialist	19	Approval given

The development of the intervention prototype is presented below.

### *Version 1 development*

Following the identification of the study conducted by Thornicroft and colleagues (Clement et al., 2012), the researcher contacted the authors to request a copy of the DVD that they had used. They kindly supplied a copy of the DVD, entitled *Combating Stigma*, and granted the researcher permission to use it in the present study. As the DVD was prepared in collaboration with a registered charity, Rethink, the researcher also contacted the director of this organisation, who gave permission for its use via email.

The researcher watched *Combating Stigma* and found it to feature a psychiatrist, service users and carers discussing themes commonly related to mental illness, such as recovery and dangerousness. Its emphasis was on mental illness stigma from the perspective of service users and their carers. After watching it, the researcher selected four clips (one of the psychiatrist and the remaining three of service users) that were related to the themes of recovery and the negative media portrayal of mental illness. The researcher also searched the websites of mental health organisations and charities such as Rethink and Mind that make information and resources on stigma and mental disorders freely available on social network sites such as YouTube. A complete list of the clips and their sources is given in Appendix 4 of the appendices. The overall compilation of selected clips from *Combating Stigma* and the websites of mental health organisations and charities constituted Version 1 of the film intervention prototype, which ran for 70 minutes.

### *Copyright permission*

The clips used in the filmed DVD intervention came from two primary sources; the DVD ‘*Combating Stigma*’ produced in 2008 by ‘Rethink’ a mental health organisation in

collaboration with King's College London's Institute of Psychiatry, Psychology and Neuroscience (IOPPN) and the Internet (YouTube). Emails seeking permission to use, edit and display clips from the *Rethink* DVD were sent to Jo Loughran, head of the Rethink organisation and Graham Thornicroft, Professor of Community Psychiatry and head of health service and population research department at the Institute of Psychiatry, King's College London. The way the clips of Professor Graham were incorporated may appear to the viewers that he has endorsed the filmed intervention. This point was made clear when requesting permission to incorporate his clips. Permission was granted from both Professor Graham Thornicroft and Jo Loughran. The remaining clips were obtained from YouTube, which is a source readily accessible for viewing by members of the public and therefore acknowledging credits and a personal disclaimer against ownership which were displayed at the end of the filmed intervention were considered suffice as a means of acknowledging their contribution.

#### *Version 1 review process*

Version 1 of the intervention prototype was reviewed and discussed with a mental health specialist from the expert advisory group. The recommendation was made that the film intervention be shortened and the addition of Arab-specific material should be considered.

#### *Version 2 refinement*

The researcher ran an exploratory search of Arabic mental health websites, similar to that mentioned in the development of Version 1. Five Arabic clips were retrieved and included in the intervention prototype. Of these, one was a personal testimony of a service users' journey with mental illness and the remaining four were staged audio clips about mental illness stigma and employment, marriage, unscrupulous treatment and recovery. The clips included in the film intervention prototype were trimmed in length, giving an overall running time of 60 minutes.

#### *Version 2 review process*

The review process combined expert and peer review. A mental health specialist and e-learning expert reviewed the intervention prototype and advised on shortening it, suggesting that the quality was variable and that the researcher could divide up scenes and add some comment on the Arab data which was not applicable due to its cultural

context. Peer review was positive: the reviewers found the prototype informative and interesting, and confirmed the pertinence of the Arab data. This was useful feedback, as the researcher needed to engage student nurses of similar ages and backgrounds. After obtaining permission, the researcher used the opening and concluding clips from *Combating Stigma* by Professor Thornicroft in the intervention prototype.

#### *Version 3 refinement*

Scene dividers were included and amended as per the recommendations. The DVD was shortened again so that the running time was now 50 minutes. The first aide memoire was created which summarised each scene with the intended key message (Appendix 5). This was then fed into the following review process.

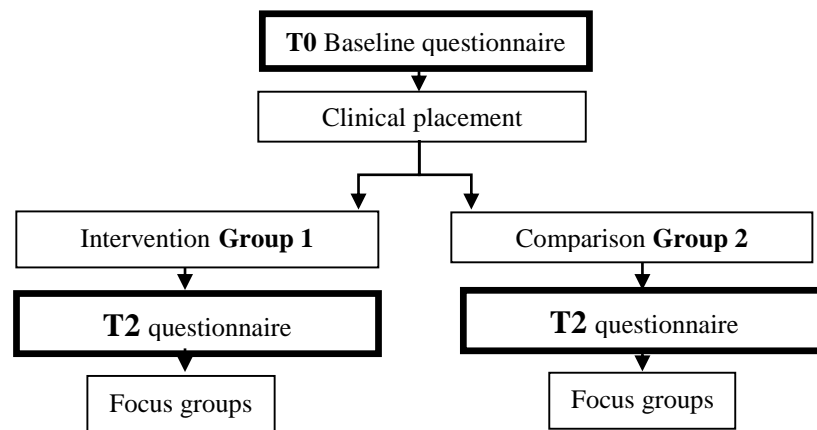
#### *Version 3 review process*

Mental health specialists from the EAG reviewed the intervention prototype and approval was given. At this stage of review a second film aide memoire with analysis questions was provided (Appendix 6). This contained a summary of each scene as per version 2. However, here the panel members were asked to identify what they felt were the key messages for each scene, in order to provide a comparative validation of the researcher's analysis of the intervention.

The third iteration was then tested for usability, as follows.

### **6.6.2 Usability testing of the intervention prototype**

As noted at the beginning of Section 6.6, there were two stages to the usability testing of the intervention prototype: testing the face validity of the components, then reviewing feedback from participants and refining the intervention. Figure 6.5 offers a visual representation of these stages, which are discussed below.



**Figure 6.5** Flow diagram of usability testing of the intervention prototype

TOTAL SAMPLE = 4<sup>th</sup> year nursing students      n=40

GROUP 1 = Service user DVD film      n=20

GROUP 2 = PowerPoint lecture      n=20

T0 = Baseline questionnaire

T2 = Post-clinical placement questionnaire

Length of total mental health course = 16 weeks

Clinical placement duration = 12 weeks (two days per week) consisting of 16 weeks minus one week of theoretical lectures, two weeks of Hajj break and one week of exam revision.

### ***Stage 1: Testing the face validity of the components: September 2011***

This first stage was conducted over two trips to Saudi Arabia in 2011. The first trip was concerned with identifying whether the student nurses understood the terminology of the information sheet, consent form and baseline questionnaire (T0). This trip also served to identify important logistical information such as the timing required to read and complete the documents. The second trip was conducted three months later, when nursing students were presented with the prototype intervention and then provided feedback in the form of focus groups and a questionnaire (T2). The responses and feedback from both trips were reviewed in Stage 2.

*Trip1: Testing the face validity of the information sheets, consent forms and baseline questionnaire (T0)*

- **Participants**

The number of fourth-year nursing students expected for the academic year of 2011 at King Abdul-Aziz University was 40. On the first day of the academic semester, only 28

students were present; these were invited by the researcher to a sign up session held in their designated lecture hall. The reason behind this discrepancy in numbers was that one student had failed and thus had to repeat the 3<sup>rd</sup> year of the course, while the other 11 students were absent. The researcher made a note that it is common for students to be absent on the first week of the academic semester.

- Procedure

Following an introduction, the researcher gave each of the students a copy of the information sheet and consent form. The students were given approximately 15 minutes to read the information sheet and circle or underline any words or sentences that they did not understand. Any questions from the students, such as on words or sentences, which were difficult to understand, were answered and recorded as field notes. The students were then told that those who were interested in taking part in the study should sign the consent form and bring it with them next day.

On the following day, the 28 participants gathered in the same lecture hall with their consent sheets in hand. Each was given a unique random number, generated by the Excel random number generator. Participants were asked to keep this number as a reference because it would be used to identify them anonymously throughout the study. Each was then given a copy of the baseline questionnaire and asked to note down their unique identifying number on the cover page, to read through the questionnaire and to circle or underline any words or sentences that they found difficult to understand. Again, their questions were answered and noted. Once the T0 questionnaires were completed, participants were thanked for their time. The importance of remembering their unique number for the second part of the study, to take place three months later, was reemphasised.

The students then resumed their theoretical lectures in the university and started their clinical placement at a psychiatric setting in their second week of the academic year, according to their existing course schedule.

*Trip 2: Testing the face validity of the prototype intervention (DVD and PowerPoint)*

Three months after the first trip, the researcher returned to the study site to test the educational intervention and its comparison condition, to administer post-intervention (T2) questionnaires and to run focus groups. Once again, making use of the Excel random

number generator, the researcher first randomly assigned the participants by their unique identifying numbers into one of the two groups of interventions. Next, the researcher printed out two lists of unique identifying numbers and pasted each on the door of a separate lecture hall. In the intervention condition (group 1), the DVD film was viewed on the first floor, while the PowerPoint lecture condition (group 2) was held on the ground floor. Participants were asked to scan the lists on the doors to determine which group they belonged to.

It is worth noting here that while 28 students participated at baseline, all students present on the day of the post-intervention questionnaire were told that they were welcome to attend one of the two groups, although their data would not be used as part of the study if they had not completed the T0 questionnaire. A total of 30 students were present for the T2 questionnaire: 12 in group 1 and 18 in group 2. This unequal distribution of participants was due to a higher rate of absenteeism from group 1. Four of the fourteen group 1 participants who had been present at baseline were now absent and another mistakenly joined group 2, leaving nine eligible participants in the T2 group 1. Only one original group 2 participant was absent, leaving 13 eligible participants in that group for T2. There were also eight post-intervention participants who were ineligible because they had not participated at baseline.

While the participants were taking their seats, the researcher asked the mental health module instructor at the study site to play the DVD film intervention in exactly 15 minutes time; the researcher then headed to the ground floor lecture hall to conduct the PowerPoint lecture condition for group 2, ensuring that the two interventions were run simultaneously. The module instructor was asked to give the participants the T2 questionnaires after they had finished watching the film, and to collect them once they were filled in. She was also asked to notify the students that those interested in participating in the focus groups should come in the following day at 3pm for an expected 30-40 minute discussion in the same lecture hall. The researcher notified group 2 that those interested in participating in the focus groups should come in the following day at 4pm, also for an expected 30-40 minute discussion in the designated lecture hall.

In addition to the outcome measures related to the intervention, the T2 questionnaires consisted of open-ended questions asking the participants about the clarity of the statements, best and worst aspects of the intervention and recommendations for

improvements. The film ran for a total of 50 minutes, while the PowerPoint lecture ran for approximately 60 minutes. Following the interventions, the module leader handed the T2 questionnaires collected from group 1 participants to the researcher, who went through the questionnaires from both groups and found that eight students from group 1 and six from group 2 had indicated a willingness to participate in the focus group sessions.

Two of the eight students from group 1 were absent on the day of the focus groups, meaning that six from each group attended. In each case, the researcher asked the participants to sit in a circle facing one another and to kindly switch their mobile phones to silent. She then followed the predetermined protocol by welcoming the students, telling them the expected duration of the session, explaining the aim of the study and reading the confidentiality points regarding anonymity. The researcher then asked if all the students consented, which they did, and if they had any questions, which they did not, before she started recording the session. The group 1 session lasted 31 minutes and the group 2 session 35 minutes.

Both groups were asked the same four open-ended questions on the intervention they had attended, with minimal intervention by the researcher. However, prompts such as ‘Could you tell me more?’ or ‘Please explain what you mean’ were used during extended periods of silence and/or to trigger or generate further discussion on a particular area. Towards the end of each session, the researcher summarised the main points discussed and asked participants whether they felt she had missed anything or if they wanted to make any additional points. She then concluded each session by thanking the members for their contributions.

During the focus group sessions, feedback was gathered in response to the following questions:

- What are the nursing students’ previous experiences of educational training? *(Have they ever encountered this type of material before? If so, could they provide examples?)*
- How would the nursing students describe the educational material? *(Allowing room for group debate – What did they think of it? How did it make them feel?)*
- With reference to the nursing students’ experience of clinical placement, how could the educational material be adjusted? *(Allowing room for group debate – Did they have any suggestions for how the material could be improved?)*

## ***Stage 2: Reviewing feedback from participants and refining the intervention prototype for feasibility/pilot testing***

In Stage 2 the procedures presented above were reviewed in greater detail, before the feedback gathered through the questionnaires and focus groups was reviewed for its recommendations regarding the modification of the prototype intervention for use in the next phase of feasibility/pilot testing. The gathering of these data was considered in regard to participant sample, potential limitations and challenges.

### ***Lessons learnt from the pilot study***

The pilot study helped to shed light on some challenges faced when conducting the procedure at the study site. The following paragraphs discuss these challenges and present recommendations on how to avoid them in the feasibility/piloting phase of the study.

- **Comparative lecture condition (PPT)**

Although PowerPoint lectures are considered to be the standard way of teaching on this course, in order to achieve a fair comparison between conditions, material would need to be delivered by the usual lecturers at the study site. Transcriptions from the discussion groups made it apparent that the primary researcher may have influenced the reception of the PowerPoint lecture. This was not the goal of the lecture and may have compromised comparisons. It was evident that social desirability might have influenced responses. Furthermore, lecturer input may have prompted additional confounds due to the openness to acknowledge related examples given by students, as well as the lecturer's relevant specialisation. Finally, evaluation in the focus groups may have been biased by the fact that the lecturer was the same person they had to feed back to. For this reason, recommendations for future amendments include the need for regular mental health academic staff at the study site to deliver the lecture, in order not to confound results. Although each lecturer may have her own teaching style, this will allow for both the intervention and the comparison lecture to be delivered in the usual manner prescribed at the study site for this module, thus reducing the risk of bias.

- **Focus group considerations**

Although participants switched their mobile phones to silent as requested, ideally they should have been asked to turn them off altogether, because each time any of their mobiles rang it caused interference and static that was also picked up on the recorder, making it



hard for the researcher to hear what was being said. This was not audible during the discussions and so did not disrupt the sessions, but was an issue during playback and transcription. The researcher carried out tests and confirmed that a back-up recording on a mobile phone did not record this interference. At the feasibility/piloting phase, two recorders will therefore be used simultaneously to record the interviews, as well as a backup in case one should malfunction. A further modification would be to put a sign on the door to avoid interruptions by other students or staff during the interviews. This is based on the fact that non-participants walked into the room where the focus groups were being held, not realising that a study was taking place. Signs will also be used to avoid this happening during the interventions.

- Recommended intervention modifications

There were also issues with the actual intervention and its comparison. Commonly identified issues were the length of the intervention and its comparison condition for both groups: participants suggested that both would have been better had they been shorter, at around 30 minutes. In the film intervention, one particular clip, highlighting the idea that 100% recovery is possible, was noted as being too long at 10 minutes. For the film intervention, this clip will therefore be shortened to convey only the main message and this reduction will bring the total length of the film to within the required parameters. Regarding the PowerPoint condition, participants mentioned in their questionnaires that some slides could have been omitted as they were not of direct relevance to stigma. These included background information regarding Maslow's Hierarchy of Needs that was used to introduce recovery and is of more general relevance than specifically relevant to stigma. Furthermore, in the focus groups, a minority of participants noted that although they did enjoy participating in the discussions, these may have been too long. It would be therefore be recommended for the feasibility/piloting phase that the discussion time be reduced in length, making the PowerPoint about 50 minutes rather than 60 minutes.

Participants also noted that although the material provided in both interventions was clear, the film intervention required viewers to switch between watching clips in English and Arabic in a short space of time. It was suggested that this was an issue which could be resolved by grouping together clips of each language. Regarding the filmed intervention, problems with the volume were reported. The speech sounded muffled on the speaker system and this appeared to affect participants at the back of the lecture hall in particular.

To remedy this, an additional speaker will be placed at the back of the hall and tests will be carried out to ensure that the equalisation of sound is sufficient for the study. In addition, the projector provided at the study site had a technical malfunction and this led to the need for the researcher to bring her own overhead projectors. As a result, the feasibility/piloting phase will also utilise these projectors as a backup in case any technical issues should arise.

The focus group particularly enjoyed the Arabic clips in the film, especially one where a woman detailed her journey through illness and recovery. The participants noted that they found it easy to relate to what she was saying and that it helped them to learn about their own society's stigmas. They commented on the fact that the identity of this contributor was hidden and debated why this would be the case. They mentioned that self-esteem seemed to be higher in the English speakers and noted that self-esteem was problematic in a society where every illness, mental or otherwise, seemed to be stigmatised and hidden. Discussion highlighted the need for wider understanding that mental illness is not something to be ashamed of, nor the fault of the sufferer, and that it can be cured. Participants felt that education about stigma in society could resolve these issues over time. The focus group also suggested that participants might like to observe filmed interactions between mental health professionals and services users. Although this is acknowledged here, it is beyond the scope of this study.

#### *Limitations of the usability study*

The limitations of using a focus group method of data collection are acknowledged. These include the relative over-representation of final-year nursing students, whose views may have dominated the findings. All participants attended a single public university in Jeddah, so their shared experience and local nursing training programme will have limited the generalisability of the findings.

#### **6.6.3 Final iteration of filmed DVD intervention**

The film drew upon a compilation of clips from a number of sources as discussed in Chapter 6; a summary table of the sources is provided in Appendix 4. The film consisted of a total of 19 scenes of which five were in Arabic and 14 in English (the manuscript of the filmed DVD intervention is attached in Appendix 11). It opened with a prologue including background music and written animated script, which made the participants well aware of the kind of educational material they were about to view while clearly

indicating the overall aim of the film. The prologue was followed by an introduction by Professor Graham Thornicroft from the Institute of Psychiatry, Psychology and Neuroscience, King's College London. The remainder of the content scenes alternated between short clips of personal accounts of service users (and in a single clip of a carer as well), staged scenes and Arabic audio scenario clips on stigma and mental illness. The key themes covered in these scenes were: marriage, employment, media, violence, treatment and recovery. The final scene of the film was a conclusion by Professor Thornicroft, followed by closing remarks in the form of written animated script with background music. In the film, a total of 12 service users and one carer gave detailed personal accounts of the experience of stigma and mental illness. For a detailed breakdown of the content and key message of each of the scenes, please refer to the film aide memoire in Appendix 5.

## **6.7 Conclusion**

The three parts of the development phase had clear implications for the conduct and content of the feasibility/piloting phase, discussed in the following chapter. Part 1 concluded that the theoretical foundation for the intervention was best supported by a conceptual framework drawing on the work of Thornicroft and Steckler. This informed Part 2, the systematic review, which focused on educational interventions targeted at healthcare professionals. The modelling of the prototype intervention was thereby grounded in both theory and evidence-based practice. Thus, the prototype incorporated those elements of interventions found to be most effective in initiating change in attitudes, behaviour and knowledge among healthcare professionals, including students. Part 3 then tested the prototype and amended it to produce a refined version, concluding the development phase of the MRC framework. The refined version was piloted for feasibility, as explained in the next chapter.

The DVD that accompanies this thesis should be watched at this stage prior to reading Chapter 7. A copy of the DVD manuscript containing a translation of Arabic scenes can be found in Appendix 11.

## **CHAPTER 7**

### **Exploratory randomised controlled trial**

#### **7.1 Introduction**

This chapter presents the exploratory randomised trial undertaken to evaluate the potential effectiveness and feasibility of the filmed educational intervention, with the experiences of service users and their carers, aimed to reduce mental disorder-related stigma among Saudi nursing students. The intervention is compared against a factual PowerPoint lecture condition given by a mental health lecturer and an education-as-usual group, which in the Saudi context is no education to reduce mental disorder-related stigma. The process evaluation of the exploratory trial is presented in Chapter 8, using qualitative methods. Section 7.2 presents the aim and objectives of the trial. Section 7.3 explains the research design and Section 7.4 presents the outcome measures used. Section 7.5 reports on the ethical approval process. Section 7.6 discusses the study procedures including the samples, site, and randomisation procedures. Section 7.7 discusses the intervention and its comparative conditions. Section 7.8 explains the data extraction, entry and analysis process. Section 7.9 presents the overall descriptive results of the exploratory trial, followed by Section 7.10 with the more intricate level-by-level inferential statistical tests to meet the research objectives that are listed in Section 7.2. The chapter concludes with Section 7.11, which summarises the main findings.

#### **7.2 Aims and objectives**

The overall aim of the exploratory trial at the end of the developmental phase of the MRC complex intervention framework was to preliminarily evaluate the potential benefits of the intervention and ultimately to inform the design of a future definitive randomised controlled trial (RCT). In addition to comparing the DVD intervention to an education-as-usual (EAU) control group and a comparative lecture condition (PPT), this study used a factorial design to determine the feasibility of the intervention among students in different years (2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup>) of nursing training. As an exploratory trial, the study aimed to assess the preliminary effectiveness of the intervention in terms of outcome and provide data on the feasibility of the intervention in terms of procedure logistics and recruitment, in order to guide the design of a future definitive RCT.

### **7.2.1 Objectives of the exploratory trial**

The main objectives of the exploratory trial were to:

1. Describe specific demographic and personal profile characteristics of the nursing students in the study at baseline;
2. Describe the indicators of mental disorder-related stigma—i.e. attitudes, intended behaviour and knowledge—held by all nursing students in the study between the three time points: baseline (T0), post-intervention (T1) and follow-up (T2);
3. Control for the effects of inbuilt confounding factors on the changes in the indicators of stigma at T1 for the intervention and its comparative conditions by adjusting baseline values;
4. Control for the effect of inbuilt confounds on the changes in the indicators of stigma at three-month follow-up by adjusting post-intervention values.
5. Assess the influence of clinical placement between year 4 students from the DVD intervention and the comparative condition.

### **7.3 Research design and methodology**

The choice of research methodology and design for the exploratory trial came about after an in-depth consideration of the research objectives and the forms of data collection methods and tools that would best achieve them. It was necessary for this study to consider more than one methodological approach, as a purely quantitative or qualitative approach would have been unable to achieve the study objectives, due to the complexity of the subject matter: stigma. Hence, this trial adopted a mixed methods research design.

Mixed methods research is usually defined as the integration of qualitative and quantitative data in the same study (Johnson et al., 2007). Although these are sometimes seen as conflicting, researchers have more recently been pushing for a paradigm shift to a more ‘pragmatic’ approach (Johnson and Onwuegbuzie, 2004), which involves the collection of both quantitative and qualitative data to ensure more realistic and conclusive explanations of what works (Datta, 1994). Tashakkori and Teddlie’s (1998) definition of mixed methods research is considered particularly applicable to the development and evaluation of complex interventions, as they define it as the combination of “qualitative and quantitative approaches into the research methodology of a single study or multi-phased study”. This definition demonstrates that mixed methods as a research methodology suits the multi-phased model of the development and evaluation of complex

interventions as per the MRC framework guidelines (Craig et al., 2008).

Greene (2007) lists five reasons to using mixed methods research that can contribute to the development and evaluation of complex interventions. These are: Triangulation, an approach that increases validity in findings, whereby the same variables are measured using different methods; Complementarity, an approach using different methods to explore different aspects of the same topic in order to gain greater insights into the whole; Development, an approach that uses the outcomes from one method to inform the development of another; Initiation, an approach similar to complementarity, except that the aim is to branch out in different areas and so create new understandings; and Expansion, an approach for broadening the scope and range of a study whereby different methods are used to explore different phenomena. For this study, a mixed methods approach was chosen to serve two primary purposes, which were to facilitate the development of the different phases of the intervention and for them to complement one another, so that the shortcomings of the quantitative method were counteracted by the strengths of the qualitative method and vice versa, resulting in a comprehensive whole (Simons and Lathlean, 2010).

Feasibility/piloting studies are considered fundamental to the development of RCTs (Lancaster et al., 2004; Thabane et al., 2010), which are often regarded as the gold standard of clinical trials when testing the potential effectiveness of interventions in evidenced-based research (Piantadosi, 2005). RCTs tend to be expensive and time consuming; therefore piloting studies are run beforehand, chiefly to determine their feasibility and validity; the MRC guidance for developing and evaluating complex interventions emphasises the significance of using pilot studies prior to definitive RCTs (Craig et al., 2008). In accordance with these recommendations, a feasibility/pilot study was conducted in the form of an exploratory RCT, with the aim of providing an indication of the response and dropout rates, which would in turn guide the recruitment process for the future definitive RCT. The pilot study also tested the proposed randomisation process and troubleshoot resources and logistics, such as the study questionnaires, information sheets, consent forms, the intervention and its comparative conditions, for clarity and comprehension.

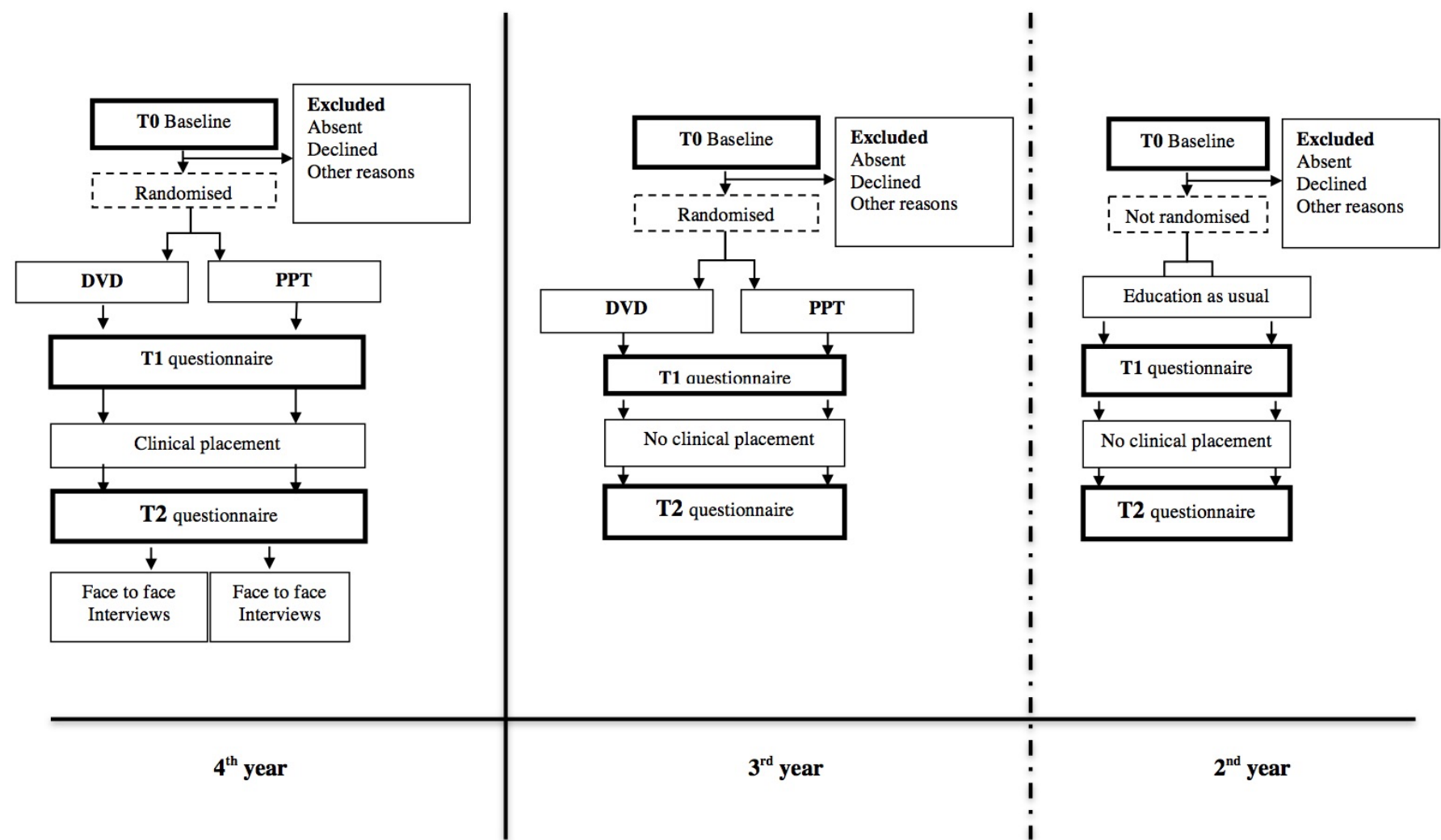
Using a mixed methods design the study objectives were achieved through an exploratory trial and a process evaluation (using semi-structured qualitative interviews), the latter of

which is reported in Chapter 8. The factorial design gave the RCT two active arms, the DVD educational intervention and the comparative PPT lecture condition, in addition to the EAU control. However, because the samples were from three different years of training, there were in effect four active arms (4<sup>th</sup> year DVD, 4<sup>th</sup> year PPT, 3<sup>rd</sup> year DVD, 3<sup>rd</sup> year PPT) in addition to the control (2<sup>nd</sup> year EAU). The RCT also made use of a repeated measures design, whereby the outcome measures (Appendix 7), were distributed and completed by participants at the three time points specified above in Section 7.2.1: immediately before (T0) and after the intervention (T1), then three months later (T2).

The sequence of data collection procedures, including randomisation, allocation and participant flow through the exploratory trial, is summarised in Figure 7.1. The following is a summary of the allocation numbers:

<b>Total Sample</b> = 4 <sup>th</sup> year (n=44) + 3 <sup>rd</sup> year (n=61) + 2 <sup>nd</sup> year (n=55)	n = 160
Intervention: Service user DVD film: 4 <sup>th</sup> year (n=22) + 3 <sup>rd</sup> year (n=30)	n = 52
Comparative condition: PPT lecture: 4 <sup>th</sup> year (n=22) + 3 <sup>rd</sup> year (n=31)	n = 53
Control: Education as usual 2 <sup>nd</sup> year (n=55)	n = 55
<b>Length of total mental health course</b> = 16 weeks	
<b>Clinical placement period for 4<sup>th</sup> years</b> = 12 weeks (2 days per week)	

**Figure 7.1** Data collection, including randomisation, allocation and flow through the exploratory RCT across the three years of training





## **7.4 Description of outcome measures**

The outcome measures collected in this study included those on attitudes, intended behaviour, knowledge and the clinical learning environment, in addition to demographic and personal profile characteristics of the sample. The primary outcome measures for this study were the Mental Illness Clinician's Attitudes (MICA) scale (Kassam et al., 2010), the Reported and Intended Behaviour Scale (RIBS) (Evans-Lacko et al., 2011) and the modified Social Contact Intended Learning Outcomes (SCILO) (Clement et al., 2012). A secondary outcome measure was the adapted Clinical Learning Environment Inventory (CLEI) (Henderson et al., 2010). Copies of the outcome measures used at different times points in this study are presented in Appendix 7.

The importance of psychometric testing (mainly reliability and validity) of research instrumentation in evidence-based nursing research is well known (Buelow & Hinkle, 2008). According to Kerlinger (1986), a measuring instrument is considered reliable if it measures a construct consistently over time, giving the same results. The most common forms of reliability testing include test-retest, split-half reliability and internal consistency reliability (Burns and Grove, 2009). A measuring instrument is considered valid if it measures the intended construct as it is supposed to. The most common forms of validity testing include content validity, construct validity and factor analysis (Burns and Grove, 2009). The outcome measures used in this study were developed and tested for reliability and validity by previous researchers (Henderson et al., 2010; Kassam et al., 2010; Clement et al., 2012; Evans-Lacko et al., 2011) in similar intervention studies. Due to the relatively small sample size of the current research study, the primary outcome measures were tested for face validity and acceptability, as discussed earlier in Chapter 6. A description of the demographic and personal profile characteristics and outcome measures used in this study is detailed below.

### **7.4.1 Demographic and personal profile characteristics**

The demographic and personal profile characteristics collected included the participants' age, nationality, year of training and whether they had attended previous courses on mental disorders. Data were also collected on whether the participants were exposed to people with mental disorders. They were asked if they either previously or currently lived or worked with someone or had a neighbour or close friend with a mental disorder.

#### **7.4.2 Mental Illness Clinician's Attitudes scale**

The MICA scale consists of 16 items measured on a six-point Likert scale and scored in a manner, which allows a low total score to represent less stigmatising attitudes towards individuals with a mental illness and psychiatry. Items that require reverse scoring are 1, 2, 4, 5, 6, 7, 8, 13, 14 and 15. The minimum score on the scale is 16, which shows less stigmatising attitudes, while the maximum score of 96 demonstrates a high stigmatising attitude towards individuals with a mental illness.

The MICA scale was first tested for internal reliability using Cronbach's alpha and Spearman-Brown split half correlation. It appeared to have a good internal consistency of  $\alpha = 0.79$  in Kassam et al. (2010) and  $\alpha = 0.76$  in Clement et al. (2012), both studies which used a mental health-related intervention similar to the one used in this study. The test-retest reliability is reported in Kassam et al. (2010) as 0.80 (95% CI 0.68-0.91) and the standardised response mean rate for the scale was 0.4 (95% CI 0.02-0.8), reflecting its overall responsiveness, reliability, divergent and convergent validity as a tool for measuring attitudes to mental illness in medical education studies. The MICA scale used in Kassam et al. (2010) was intended for a sample of medical students, so the wording was slightly modified in the Clement et al. (2012) to suit the target sample of nursing students. The present study adopted the modified version used by Clement et al. (2012), with further minor alterations to suit the cultural needs of the targeted sample of Saudi nursing students.

#### **7.4.3 Social Contact Intended Learning Outcomes test**

The SCILO test was designed to test the knowledge of participants regarding stigma towards individuals suffering from mental disorders. It consists of 10 statements and the participant should choose a true or false answer to indicate what they think. In this study the test was adapted: the wording and number of items were slightly modified and only eight of the original 10 questions were used. The scoring system is based on total scores, where a higher total score represents more knowledge about individuals with a mental illness, as a value of 0 is given to every incorrect answer and a value of 1 to every correct answer. Possible scores were 0-8. SCILO was not designed to be a scale, but rather a test of participant's main concepts regarding stigma and discrimination towards individuals suffering from a mental illness. The adapted SCILO is based on the schedule devised by Clement et al. (2012). Although it is not a scale, it has been deemed to have both content

and face validity with items related to discrimination and stigma to mental illness and a reported internal reliability of  $\alpha = 0.38$  as per Clement et al. (2012).

#### **7.4.4 Reported and Intended Behaviour Scale**

RIBS provides statements about willingness to live, work or have a relationship with an individual suffering from a mental illness. It consists of four items and is scored using a 4-point Likert scale. The total maximum possible score is 20, demonstrating positive (less stigmatising) intended behaviour, and the minimum possible score is four, demonstrating negative (more stigmatising) intended behaviour. The overall test-retest reliability of RIBS is moderate at 0.75, with a good internal reliability of  $\alpha = 0.85$ , as reported in Evans-Lacko et al. (2011) and  $\alpha = 0.75$  according to Clement et al. (2012). On the whole, it is considered to have a substantial internal consistency with strong validity.

#### **7.4.5 Adapted Clinical Learning Environment Inventory**

The adapted CLEI is a 20-item instrument with four subscales: student engagement, student dissatisfaction, student level of content with learning experience and student motivation, scored using a 4-point Likert scale (Henderson et al., 2010). Items that required reverse scoring were 10, 11, 12, 13 and 14. The total maximum possible score is 80, indicating a positive experience of the clinical environment and the minimum possible is 20, indicating an overall negative experience of the clinical environment. The adapted version is more concise than that originally developed by Chan (2003), which had 42 items, in that it enables differentiation among four features of the clinical learning environment and has proved more beneficial to clinical instructors. Internal reliability is reported as being reasonable across all four factors, with Cronbach's alpha values of 0.87, 0.75, 0.67 and 0.78 (Henderson et al., 2010).

### **7.5 Ethical approval and study clearance**

Ethical approval to conduct this exploratory trial and the usability test reported earlier in Chapter 6 was sought from two sites: King's College London in the United Kingdom and King Abdul-Aziz University (KAU) in Saudi Arabia. Approval from the Psychiatry, Nursing and Midwifery Research Ethics Sub-Committee (PNM RESC) at King's College London was granted on the 14<sup>th</sup> October 2011 and approval from the Ethics and Research Committee of the Faculty of Applied Medical Sciences at KAU was obtained on the 18<sup>th</sup> July 2011 (refer to Appendix 8 for all ethical approval related documentation).

## **7.6 Study procedure**

The exploratory RCT used a repeated measures design to assess and compare the effect of the DVD intervention against the comparative PPT lecture condition and the EAU control group at baseline, immediately post-intervention and at three months follow-up. Aside from the demographic and personal profile characteristics, which were collected once only at baseline, all primary outcome measures were assessed at T0, T1 and T2. The study procedure is illustrated earlier in Figure 7.1 (pp. 168). The following two sections describe the participant samples, the recruitment site and the recruitment procedure.

### **7.6.1 Participant samples and study recruitment site**

The exploratory RCT took place at KAU, which is the national governmental university situated in Jeddah, Saudi Arabia. The nursing programme at KAU is a four-year bachelor's degree programme followed by a fifth internship year consisting of purely clinical placement at the KAU hospital. In the first year of the nursing programme, students take general science subjects (physics, biology, chemistry and English) and are required to pass these courses in order to be accepted into the nursing programme, which lasts the remaining three years. Initially, students starting the fourth and final year of the nursing programme were the primary focus of the study, as it is in the first semester of year four that students take a 16-week mental health nursing module, which consists of theory-based PowerPoint lectures as well as two days per week of clinical placement. During the teaching of the standard module in the fourth year, students do not receive any educational material that is focused directly on mental disorder-related stigma.

The initial intention was to recruit for the purpose of this study the entire cohort of year four nursing students, who were to be randomly assigned to one of two conditions: the DVD intervention or the PPT lecture on mental disorder-related stigma. However, given the relatively small sample of year four students available at the time of data collection, all students in the second and third years of the nursing programme were also invited to take part in the study.

Although this decision provided a confounding influence on the current study design, it was controlled for during the statistical data analysis process, presented later in this chapter. Furthermore, as this is an exploratory trial it was considered beneficial to draw on the students in the different years of educational training in order to maximise the

opportunity and to examine the potential effects of the intervention and its comparative condition on different groups of Saudi nursing students. Hence, students in the second year of the nursing programme served as an EAU control group, as they received neither the filmed intervention nor the comparative lecture, while those in the third year of the nursing programme were randomly allocated to attend either the filmed educational intervention or the comparative lecture condition. Students across all three years of the nursing training programme included in the present study were subjected to the primary outcome measures at T0, T1 and T2.

### **7.6.2 Recruitment procedure**

#### ***Identification and selection of participants***

Participants were identified in coordination with the head of the Nursing Department, the mental health course leader and academic affairs personnel at KAU. The researcher was provided with a timetable of the weekly lectures being held for the students in the final three years of the nursing training programme. In addition, the researcher was also provided with the numbers of enrolled students per year of training in the academic year 2012. The researcher coordinated and arranged with the module leaders from the different years to be allotted time to conduct the intervention with the students. Recruitment of the fourth year nursing students for the face-to-face interviews took place following the clinical placement and is discussed further in Chapter 8, the process evaluation of the RCT.

#### ***Randomisation and allocation process***

After being provided by the registrar's office at the study site with the number of students enrolled per year of training, the researcher was able to create a list of unique identifiers for the students in each of the final three years of the training programme.

Although second-year students received a unique identifying code and the same primary outcome measures at the three time points, similar to the students in the third and fourth years, they were neither randomised nor allocated to an educational intervention, as they were the EAU control group. Third and fourth-year students, however, were randomised and allocated to either the DVD intervention or the PPT comparative condition. The randomisation process relied on the Excel random number generator function to generate a random sequence of numbers that would link each unique student identifying code to

either the DVD or PPT group. This involved the researcher first inputting the list of unique identifying codes for all of the students across the final three years of the training programme. Next, the RANDBETWEEN function of Excel randomly allocated the students in years three and four to either the DVD or the PPT condition. This resulted in a total of four randomly assigned study groups, classified as 3<sup>rd</sup> year DVD, 3<sup>rd</sup> year PPT, 4<sup>th</sup> year PPT and 4<sup>th</sup> year DVD. The researcher then documented the unique identifier code that assigned each student to a study group and placed it in a sealed envelope along with the baseline and post-intervention outcome measures. Allocation status was revealed only after students opened the sealed numbered envelope on the day of the study.

### ***Sign-up session***

A sign-up session during the nursing induction first week of the academic year was used to recruit students from all three years of the training programme included in this study. Nursing students were approached during a 1-hour session by the researcher, who explained the importance of the study as detailed in the participant information sheet that was provided to interested potential participants (Appendix 9). The information sheet provided details of the study such as its aims and how participants were to be involved. It was made clear to participants that taking part in the study was voluntary, that their data would be anonymous and that they would not be identifiable. The nursing students were told that their decision regarding whether or not to participate in the study would not have any influence on their assessment or grading during their nursing training. Participants were offered the right to withdraw at any point in the study and told that if they did so their data would also be withdrawn from the study. Participants were provided with an opportunity to ask any questions and those who agreed to participate in the study were asked to complete and sign a consent form (Appendix 10).

## **7.7 Filmed intervention and comparative condition**

The filmed intervention and the comparative lecture condition were introduced to the subjects as forms of educational training in nursing and mental health. They were run concurrently, to avoid contamination across groups of students who received the different interventions. Both the DVD and the PPT aimed to provide an overall similar message about stigma and discrimination in relation to mental disorders, with an intended practical yet non-identical match of condition settings, making it as close to real-life practice as possible. They were of similar length, a total of 50 minutes and both focused on the same

key aspects in terms of stigma and mental disorders (definition, media, violence, employment and recovery). However, they differed in the mode in which they were conveyed (filmed DVD versus PowerPoint lecture) and their underpinning theory of how mental disorder-related stigma can be reduced.

### ***Assignment to the intervention or comparative condition***

On the day following the sign-up session, potential participants attended a second session during which the researcher distributed the sealed envelopes containing the unique identifying codes and the baseline and post-intervention outcome measures to all those taking part in the study. The participants were asked to open their envelopes, make a note of their unique identifying number on each of the outcome measures and retain it for future correspondence. They were then randomly allocated to either the filmed intervention or its comparative lecture condition, to be held in separate lecture halls at the study site. The participants were also asked to complete the baseline outcome measure prior to the intervention and the post-intervention outcome measure at the end of the session. The intervention and its comparative lecture condition were conducted in the students usual lecture halls in the Nursing Department at KAU.

#### **7.7.1 Filmed intervention**

Students allocated to the intervention were taken to a lecture hall and informed they would be watching a film. The researcher started the DVD without further comment to the students.

#### **7.7.2 PowerPoint lecture condition**

Following the recommendations of the usability study, a mental health module leader from KAU was given the PowerPoint lecture slides with notes (a copy of which is attached in Appendix 12), which she presented in the exploratory trial. It was designed to be in the form of teaching, with which the students were familiar. Although the lecture, comprising 35 slides, aimed to cover themes similar to those of the DVD, it was of a factual nature, with absolutely no reference to the personal testimonies of service users or their carers, either in the form of quotes or case studies.

### **7.7.3 Overview of intervention and comparative condition conduct**

In summary, all 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup>-year nursing students were approached to fill in information sheets, consent forms and the baseline questionnaire during the first week of the academic year. T0 was administered before any lectures with a mental health component had been given to the 4<sup>th</sup> years. On the same day, the 3<sup>rd</sup> and 4<sup>th</sup>-year students were randomly assigned to one of the two intervention groups. Immediately after the interventions, the students were given the T1 questionnaire to complete. They then resumed their theoretical lectures at the university as usual, and the fourth-year students started attending their clinical placement at a psychiatric setting in the second week of the academic year, according to their pre-planned course schedule. On the last day of their clinical placement, the 4<sup>th</sup> years were given the T2 questionnaire to fill in. The 2<sup>nd</sup> and 3<sup>rd</sup> years were also given the T2 questionnaire, but without the CLEI component, as they had not attended a mental health clinical placement. The version of the T2 given to the 4<sup>th</sup> years included the option to tick a box if they were interested in participating in face-to-face interviews. Figure 7.1 mentioned earlier (pp. 168) shows the allocation and flow of participants through the RCT, whilst Figure 7.2 (Section 7.9.1) shows the number of nursing students who participated and how they were allocated.

## **7.8 Data storage, extraction and analysis**

### **7.8.1 Data storage**

Participants were informed of how their data were to be used in the participant information sheet and in the consent form. They also needed to tick a box to agree to their information being processed for the purpose of the study and in accordance with the UK Data Protection Act 1998. Participant information would be kept anonymous to all apart from the primary researcher, supervisors and consulting statistician. This was ensured by the use of a unique identifying number in place of any other identifying information, and therefore not identifiable as personal data. Also, any stored data was kept on a password-protected computer system and/or encrypted USB and stored in a locked filing cabinet. Research guidelines outlined by the CONSORT (Consolidated Standards of Reporting Trials) Statement were strictly adhered to. Data were stored as electronic files, such as Excel spread sheets for quantitative data, Word documents for qualitative data, mp3s for interviews and focus group recordings, and PDFs for all documents that needed to be scanned in by hand before shredding. Only the primary researcher had access to personal



information relating to the study. The statistician and study supervisors were given access to data only after they had been saved anonymously. All data will be disposed of no later than four years following completion of the research study.

### **7.8.2 Data extraction and analysis**

SPSS version 21.0 was used to analyse all quantitative data in relation to the research objectives of this study, using both descriptive and inferential statistics, as summarised in Table 7.1. Descriptive statistics (frequencies, percentages, means and standard deviations) were used to describe categorical and quantitative variables such as students' demographic and personal profile data. The selection of relevant statistical tests relied mainly on how the data were distributed. If the quantitative or numerical data were normally distributed, parametric tests were applied, whereas if the data did not follow a normal distribution, non-parametric tests were applied (Nayak and Hazra, 2011).

There are different ways to test the normality of data such as visual methods and SPSS normality tests (Ghasemi and Zahedias, 2012). Data were first assessed using visual methods that involved looking at the frequency distributions of the data in the form of histograms, stem and leaf plots and boxplots. However, as these methods are not always reliable, normality tests were also used (Ghasemi and Zahedias, 2012). There are several normality tests, including the Sharpio-Wilks, Kolmogorov-Smirnov and Anderson-Darling tests. However, in accordance with Ghasemi and Zahedias' (2012) overview of normality testing, Sharpio-Wilks was used to confirm the assumption of normality, as it provides better power than the commonly used Kolmogorov-Smirnov that the authors now recommend against. The distribution of data for the quantitative outcome variables (MICA, RIBS and SCILO) used in this study was therefore assessed using the Sharpio-Wilks test of normality.

Student's t-test for independent samples was used to compare the mean values of quantitative outcome variables (MICA, SCILO and RIBS) across the categorical study variables (type of intervention and year of training). This is a parametric test used to determine whether the means of two groups from a normally distributed population differ significantly from each other. One-way analysis of variance (ANOVA) was used to compare the mean values of outcome variables in relation to the categorical variable (type of intervention group and year of training). The Bonferroni post-hoc test was used for between group multiple comparisons of mean values. A general linear model (GLM)

was used to compare mean values of quantitative outcome variables simultaneously controlling both categorical and quantitative covariates. The bootstrap method was used in the analysis of one of the outcome variables (SCILO) because it presented a skewed, not normally distributed pattern. A p-value of  $<0.05$  and 95% confidence intervals were used to report the statistical significance and precision of the estimates.

Data generated from the face-to-face interviews of the convenience sample of fourth year students were thematically analysed as reported in Chapter 8, the process evaluation of the exploratory trial.

**Table 7.1** Summary of data handling and analysis strategy

Purpose	Variables	Method of analysis	
		Descriptive statistics	Inferential statistics (using univariate and multivariate methods)
To describe and summarise subjects' demographic and personal profile characteristics at baseline	Intervention Clinical placement post intervention Nationality Age Gender	Visual inspection of the data in tabular form and graphical presentation. Descriptive data analysis using frequencies, percentages, mean and standard deviation	----
To describe and compare subjects' previous experience with mental disorders across the subject groups at baseline	Year of training Study groups Previous course/lecture on mental illness Lived with someone with a mental illness Worked with someone with a mental illness Had a neighbour with a mental illness Had a close friend with a mental illness	Visual inspection of the data in tabular form and graphical presentation. Descriptive data analysis using frequencies and percentages	----
To describe and compare the outcome measures in relation to year of training and study groups (intervention and comparative conditions)	Year of training Study groups Attitude outcome measure - MICA Intended behaviour outcome measure - RIBS Knowledge outcome measure - SCILO	Visual inspection of the data in tabular form and graphical presentation. Descriptive data analysis using mean and standard deviation. Test of normality using Sharpio-Wilks test.	ANOVA and GLM
To deal with inbuilt confounds in study design. To study the effect of confounding variables on the outcome measures		---	GLM
		---	Non-parametric approach Bootstrap GLM (regression)
To test for a significant relationship between clinical placement experience and mental disorder-related stigma measures	Clinical learning environment outcome measure - CLEI	Visual inspection of the data in tabular form and graphical presentation. Descriptive data analysis using mean, standard deviation median, inter quartile range and box plots	t-test Mann-Whitney U test

## **7.9 Descriptive results**

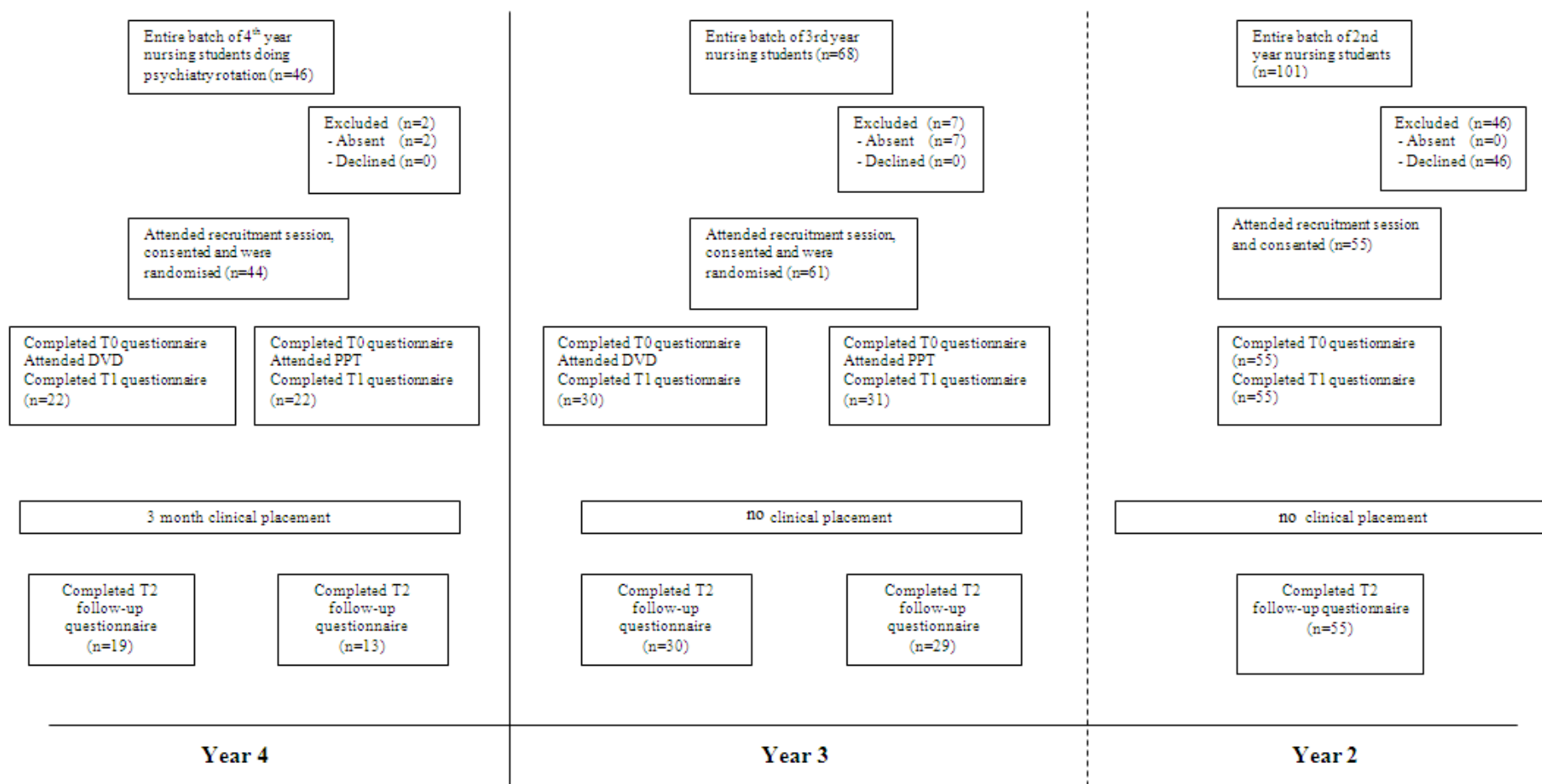
Sections 7.9.1 to 7.9.3 present the descriptive statistics of the exploratory trial. Sections 7.9.1 and 7.9.2 meet objective one of the exploratory trial, which was to describe specific demographic and personal profile characteristics of Saudi nursing students in the study at baseline. Section 7.9.3 meets objective two of the exploratory trial, which was to describe the indicators of mental disorder-related stigma (attitudes, intended behaviour and knowledge) held by all nursing students in the study at the three time points.

### **7.9.1 Participant recruitment (flow through trial)**

The total cohort of Bachelor of Science in Nursing (BSN) students registered at KAU for the year 2012 consisted of 215 female students. The BSN programme at KAU is offered exclusively to females. At the time of data collection for this study, there were no established BSN programs for males located in Jeddah; therefore male nurses in Jeddah and indeed in Saudi Arabia are likely to be qualified at diploma level. However, plans for the development of a bridging programme from diploma to BSN are underway and are likely to include male nurses in the near future.

Of the total cohort (n=215) of nursing students in training years 2, 3 and 4, 160 consented to participate in the study. Students from training years 3 and 4 were randomised to receive either the intervention or its comparative lecture condition, whereas students from year 2 were not randomised and were assigned to the EAU condition, i.e. receiving the questionnaires but no educational material on mental disorder-related stigma. The overall response rate for the participants from all three years of training at 3-month follow-up was 91.3% (146/160). The response rate per year of training at 3-months follow-up was as follows: 4<sup>th</sup> year 72.7% (32/44), 3<sup>rd</sup> year 96.7% (59/61) and 2<sup>nd</sup> year 100% (55/55). Differences in response rates amongst the three years is likely to be due to the more senior students in year four having a busier schedule and spending more time in clinical placements in comparison to students from the earlier years, who would spend more time on campus attending theoretical lectures and practicals in the nursing labs. Student flow through the trial is shown in Figure 7.2.

**Consort diagram: participant flow through the trial**



**Figure 7.2** Student flow through the trial

### 7.9.2 Personal profile characteristics

Table 7.2 reports the personal profile characteristics for the students who participated in the exploratory trial and shows that apart from the difference in year of training, the demographic and personal profile characteristics of the groups are similar. Participants ranged in age between 18 and 23 years, with a mean age of 20.09 and a standard deviation of 0.92. These data also indicate that the participants were predominantly young Saudi adults with only about 3% being of Yemini nationality. Of the student sample 34.4% (n=55) were in their 2<sup>nd</sup> year of training, 38.1% (n=61) in their 3<sup>rd</sup> year and 27.5% (n=44) in their 4<sup>th</sup> year. It is a common pattern to see a decrease in student numbers from the earlier years of training to the later years. This trend is usually related to students either choosing to transfer to other disciplines, or not being able to pass all the course modules and therefore either repeating the year or dropping out altogether.

With regard to previous experience of mental illness, Table 7.2 shows that 50.1% (n=80) of the participants had taken a previous course or attended a lecture on mental illness, while for the remaining participants 49.4% (n=78); the area of mental illness was new to them. Furthermore, of the students who reported attending a previous course/lecture on mental illness, most of them were referring to the Introduction to Psychology module that nursing students take as part of their general training; but this differs a great deal from the Mental Health/Psychiatry module taken in year four of the nursing training: the Introduction to Psychology module focuses on cognitive and behavioural milestones and development processes, and explores related theories such as Freud's stages of psychosexual development, whereas the Mental Health/Psychiatry module focuses on the diagnosis, treatment and prevention of mental disorders.

Data in Table 7.2 also revealed some interesting numbers in relation to previous or current exposure to people with mental disorders, when students were asked about whether they currently lived or had previously lived or worked or had a neighbour or a close friend with a mental disorder. Between a fifth and a quarter of participants reported having had a neighbour or currently having a neighbour (21.9%, n=35) or having lived or currently living (22.5%, n=36) with an individual with a mental illness. In this context, 'living with' referred to them sharing the same household with a family member that had a mental disorder. Conversely, almost three quarters of the participants reported never having

worked with someone (64.4%, n=103) or having had a close friend (82.5%, n=132) with a mental illness.

**Table 7.2** Distribution of number of participants and their personal profile characteristics at baseline

Year of training	Year 4 (n=44)		Year 3 (n=61)		Year 2 (n=55)
Intervention	DVD n= 22 (100%)	PPT n= 22 (100%)	DVD n=30 (100%)	PPT n=31 (100%)	EAU n=55 (100%)
Clinical placement post intervention, n (%) *	22 (100%)	22 (100%)	N/A	N/A	N/A
Nationality, n (%)					
Saudi	21(95.5%)	20 (90.9%)	29 (100%)	30 (96.8%)	41 (93.2%)
Other	1 (4.5%)	2 (9.1%)	(0)	1 (3.2%)	3 (6.8%)
Age, years: Mean (s.d.)	20.1 (0.65)	21.1 (0.58)	20.2 (0.58)	20.1 (0.48)	19.3 (0.65)
Gender, n (%) **					
Female	22 (100%)	22 (100%)	30 (100%)	31 (100%)	55 (100%)
Previous course/lecture on mental illness, n (%)					
Yes	16 (72.7%)	8 (36.4%)	15 (51.7%)	17 (56.7%)	24 (43.6%)
No	6 (27.3%)	14 (63.6%)	14 (48.3%)	13 (43.3%)	31 (56.4%)
Live with someone with a mental illness, n (%)					
Yes	6 (27.3%)	5 (22.7%)	1(3.4%)	5 (16.7%)	19 (34.5%)
No	14 (63.5%)	13 (59.1%)	24 (82.8%)	21 (70.0%)	28 (50.9%)
Don't know	2 (9.1%)	4 (18.2%)	4 (13.8%)	4 (13.3%)	8 (14.5%)
Work with someone with a mental illness, n (%)					
Yes	3 (13.5%)	5 (22.3%)	6 (20.7%)	7 (23.3%)	8 (14.5%)
No	13 (59.1%)	13 (68.2%)	19 (65.5%)	19 (63.3%)	39 (70.9%)
Don't know	6 (27.3%)	4 (4.5%)	4 (13.8%)	4 (13.3%)	8 (14.4%)
Have a neighbour with a mental illness, n (%)					
Yes	6 (27.3%)	4 (18.2%)	9 (31.0%)	2 (6.7%)	14 (25.5%)
No	3 (59.1%)	16 (72.7%)	16 (5.2%)	24 (80.0%)	28 (50.9%)
Don't know	3 (13.6%)	2 (9.1%)	4 (13.8%)	8 (13.3%)	13 (23.6%)
Have a close friend with a mental illness, n (%)					
Yes	2 (9.1%)	1 (4.5%)	3 (10.3%)	3 (10.0%)	6 (10.9%)
No	17 (77.3%)	20 (90.9%)	26 (89.7%)	26 (86.7%)	43 (78.2%)
Don't know	3 (13.6%)	1 (4.5%)	0	1 (3.3%)	6 (10.9%)

\*Only year 4 attend clinical placement at a mental health hospital; \*\*Participants are from an all-female university; EAU= Education as usual; % = percent after adjusting for missing values of all who provided a valid answer

### 7.9.3 Indicators of mental disorder-related stigma outcome measure scores

Three primary outcome measures—MICA, SCILO and RIBS—were used as stigma indicators at baseline, immediately post-intervention and at three months follow-up for nursing students in all three years in the DVD, PPT and EAU groups. The following pages report their outcome measure scores, showing changes between the three time points and

differences among the five study groups (2<sup>nd</sup> year EAU, 3<sup>rd</sup> year DVD, 3<sup>rd</sup> year PPT, 4<sup>th</sup> year DVD and 4<sup>th</sup> year PPT).

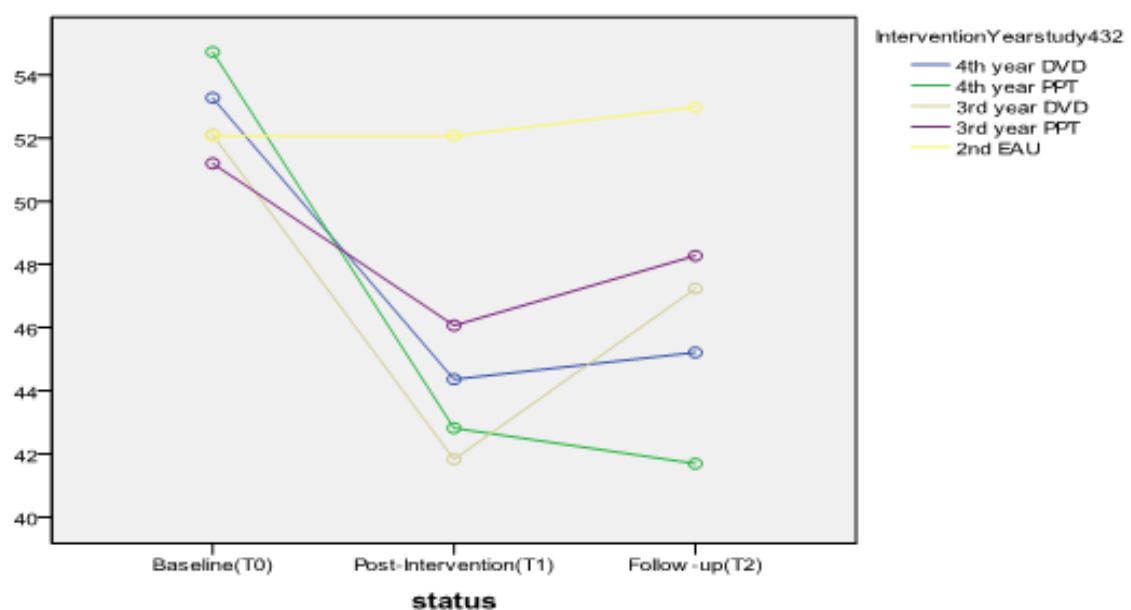
## MICA

### MICA Baseline

Table 7.3 and Figure 7.3 demonstrate that at baseline, the mean MICA scores for participants in all groups were similar, with baseline scores of above 50. This indicates that at baseline, students in all three years of training presented overall with similar high stigmatising attitudes about people with mental disorders.

**Table 7.3** Comparison of mean values (with standard deviation) of MICA outcome measure at baseline (T0), post-intervention (T1) and follow-up (T2) between the five study groups

Outcome measure & possible range: Stigmatising attitudes (MICA, 16-96)	Time point		
Study group	T0 Mean (s.d.)	T1 Mean (s.d.)	T2 Mean (s.d.)
2 <sup>nd</sup> year EAU	52.07 (6.40)	52.07 (6.40)	52.98 (6.88)
3 <sup>rd</sup> year DVD	52.10 (7.39)	41.83 (8.27)	47.23 (8.48)
3 <sup>rd</sup> year PPT	51.20 (7.90)	46.07 (7.89)	48.28 (5.98)
4 <sup>th</sup> year DVD	53.27 (8.65)	44.36 (6.61)	45.21 (4.33)
4 <sup>th</sup> year PPT	54.73 (8.80)	42.82 (8.44)	41.69 (7.17)



**Figure 7.3** Mean MICA scores in the five groups across the three time points



### *MICA Post-intervention*

Table 7.3 and Figure 7.3 also demonstrate that the mean T1 MICA scores for participants in years 3 and 4 decreased, whereas those for year 2 remained similar, indicating that students in the 3<sup>rd</sup> and 4<sup>th</sup> years of training presented with overall lower post-intervention stigmatising attitudes than those in the 2<sup>nd</sup> year of training.

Within the 4<sup>th</sup> year cohort, the PPT group presented with the steepest drop, as demonstrated in Figure 7.3 and the largest change score (-11.91), as displayed in Table 7.4. Among the 3<sup>rd</sup>-year participants, by contrast, it was the DVD group who presented the steepest drop, with a change score of -10.27. Therefore, among the 3<sup>rd</sup> and 4<sup>th</sup> year students, those in the 4<sup>th</sup> year PPT group showed the least stigmatising post-intervention attitude scores.

**Table 7.4** Comparison of MICA change scores between baseline and post-intervention (T1-T0) within the five study groups

Outcome measure & possible range: (MICA, 16-96)	Time point and change score		
Study group	Baseline T0 Mean (s.d.)	Post-intervention T1 Mean (s.d.)	Change score (T1-T0) Mean (s.d.)
2 <sup>nd</sup> year EAU	52.07 (6.40)	52.07 (6.40)	0.00 (0.00)
3 <sup>rd</sup> year DVD	52.10 (7.39)	41.83 (8.27)	-10.27 (0.80)
3 <sup>rd</sup> year PPT	51.20 (7.90)	46.07 (7.89)	-5.13 (-0.01)
4 <sup>th</sup> year DVD	53.27 (8.65)	44.36 (6.61)	-8.91 (-2.04)
4 <sup>th</sup> year PPT	54.73 (8.80)	42.82 (8.44)	-11.91 (-0.36)

### *MICA Follow-up*

Table 7.3 and Figure 7.3 demonstrate that at follow-up, the mean MICA scores for participants in years 3 and 4 increased, whereas for year 2 they remained similar. Although mean MICA follow-up scores increased from post-intervention in both years 3 and 4, they remained lower than in year 2, indicating overall less stigmatising attitudes in 3<sup>rd</sup> and 4<sup>th</sup> year students in comparison to those in the 2<sup>nd</sup> year of training at follow-up.

Within the 3<sup>rd</sup> year of training, the 3<sup>rd</sup> year DVD presented with the steepest increase from T1 to T2, as demonstrated in Figure 7.3 and indicated by the change score of 5.4 in Table 7.5. The 4<sup>th</sup> year DVD and 3<sup>rd</sup> year PPT scores increased, but to a lower degree. Only in the 4<sup>th</sup> year PPT group did MICA scores decrease (by 1.13), as demonstrated in Figure 7.3 and Table 7.5. Among the 3<sup>rd</sup> and 4<sup>th</sup> year students, the 4<sup>th</sup> year PPT group maintained the least stigmatising scores at follow-up.

**Table 7.5** Comparison of MICA change scores between post-intervention and follow-up (T2-T1) within the five study groups

Outcome measure & possible range: (MICA, 16-96)	Time point and change score		
Study group	Post-intervention T1 Mean (s.d.)	Follow-up T2 Mean (s.d.)	Change score (T2-T1) Mean (s.d.)
2 <sup>nd</sup> year EAU	52.07 (6.40)	52.98 (6.88)	0.91 (0.48)
3 <sup>rd</sup> year DVD	41.83 (8.27)	47.23 (8.48)	5.40 (0.21)
3 <sup>rd</sup> year PPT	46.07 (7.89)	48.28 (5.98)	2.21 (-1.91)
4 <sup>th</sup> year DVD	44.36 (6.61)	45.21 (4.33)	0.85 (-2.28)
4 <sup>th</sup> year PPT	42.82 (8.44)	41.69 (7.17)	-1.13 (-1.27)

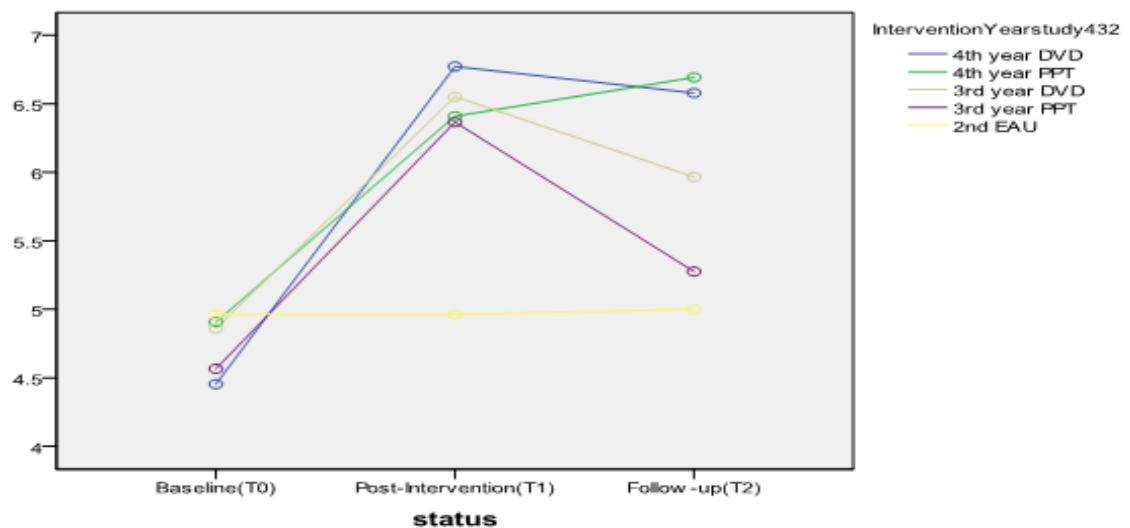
## SCILO

### SCILO baseline

Table 7.6 and Figure 7.4 demonstrate that at baseline, the mean SCILO scores for participants in each of the three training years were similar, with mean baseline scores in the range of 4.45 to 4.96, indicating that students in all three years of training presented overall with similarly stigmatising knowledge about people with mental disorders.

**Table 7.6** Comparison of mean values (with standard deviation) of SCILO outcome measure at baseline (T0), post-intervention (T1) and follow-up (T2) between the five study groups

Outcome measure & possible range: <b>Knowledge (SCILO, 0-8)</b>	<b>Time point</b>		
<b>Study group</b>	<b>T0</b> Mean (s.d.)	<b>T1</b> Mean (s.d.)	<b>T2</b> Mean (s.d.)
2 <sup>nd</sup> year EAU	4.96 (1.15)	4.96 (1.15)	5.00 (1.00)
3 <sup>rd</sup> year DVD	4.86 (1.03)	6.55 (0.99)	5.97 (1.16)
3 <sup>rd</sup> year PPT	4.57 (1.41)	6.37 (1.19)	5.28 (1.44)
4 <sup>th</sup> year DVD	4.45 (0.80)	6.77 (0.75)	6.58 (0.84)
4 <sup>th</sup> year PPT	4.91 (1.27)	6.41 (1.37)	6.69 (1.18)



**Figure 7.4** Mean SCILO scores for the five groups across the three time points

### *SCILO Post-intervention*

Table 7.6 and Figure 7.4 also demonstrate that mean post-intervention SCILO scores increased for participants in years 3 and 4, whereas they remained similar for year 2, indicating that at T1, students in the 3<sup>rd</sup> and 4<sup>th</sup> years of training presented with overall higher knowledge about people with mental disorders than the 2<sup>nd</sup> year students.

Among 4<sup>th</sup> year students, the DVD group presented with the steepest increase, as demonstrated in Figure 7.4, and the largest change score (2.32), as displayed in Table 7.7. As to the 3<sup>rd</sup> year students, it was the PPT group, which presented with the higher change score (1.80). Therefore, between the 3<sup>rd</sup> and 4<sup>th</sup> years of training, students from the 4<sup>th</sup> year DVD group showed the highest knowledge (least stigmatising) scores at post-intervention (T1).

**Table 7.7** Comparison of SCILO change scores between baseline and post-intervention (T1-T0) within the five study groups

Outcome measure & possible range: <b>Knowledge (SCILO, 0-8)</b>	<b>Time point and change score</b>		
	<b>Baseline T0 Mean (s.d.)</b>	<b>Post-intervention T1 Mean (s.d.)</b>	<b>Change score (T1-T0) Mean (s.d.)</b>
2 <sup>nd</sup> year EAU	4.96 (1.15)	4.96 (1.15)	0.00 (0.00)
3 <sup>rd</sup> year DVD	4.86 (1.03)	6.55 (0.99)	1.69 (-0.04)
3 <sup>rd</sup> year PPT	4.57 (1.41)	6.37 (1.19)	1.80 (-0.22)
4 <sup>th</sup> year DVD	4.45 (0.80)	6.77 (0.75)	2.32 (-0.05)
4 <sup>th</sup> year PPT	4.91 (1.27)	6.41 (1.37)	1.50 (0.10)

### *SCILO follow-up*

Table 7.6 and Figure 7.4 demonstrate that the mean SCILO follow-up scores decreased from T1 to T2 in three of the four groups in years 3 and 4 with the 4<sup>th</sup> year PPT being the exception. The four groups however, remained higher than the 2<sup>nd</sup> year T2 scores, indicating overall less stigmatising knowledge in 3<sup>rd</sup> and 4<sup>th</sup> year students in comparison to those in the 2<sup>nd</sup> year of training at follow-up.

Among the 3<sup>rd</sup> year students, the PPT group presented with the steepest decrease as demonstrated in Figure 7.4 and indicated by the change score of -1.09 in Table 7.8. Scores for the 4<sup>th</sup> year DVD and 3<sup>rd</sup> year DVD groups decreased, but to a lesser degree, whereas the 4<sup>th</sup> year PPT was the only group that registered an increase in its SCILO scores (0.28) as demonstrated in Figure 7.4 and Table 7.8. Among the intervention groups, the 4<sup>th</sup> year PPT students appeared to maintain the highest (least stigmatising) knowledge scores at T2.

**Table 7.8** Comparison of SCILO change scores between post-intervention and follow-up (T2-T1) within the five study groups

Outcome measure & possible range: <b>Knowledge</b> <b>(SCILO, 0-8)</b>	<b>Time point and change score</b>		
<b>Study group</b>	<b>Post-intervention T1</b> Mean (s.d.)	<b>Follow-up T2</b> Mean (s.d.)	<b>Change score (T2-T1)</b> Mean (s.d.)
2 <sup>nd</sup> year EAU	4.96 (1.15)	5.00 (1.00)	0.04 (-0.15)
3 <sup>rd</sup> year DVD	6.55 (0.99)	5.97 (1.16)	-0.58 (0.17)
3 <sup>rd</sup> year PPT	6.37 (1.19)	5.28 (1.44)	-1.09 (0.25)
4 <sup>th</sup> year DVD	6.77 (0.75)	6.58 (0.84)	-0.19 (0.09)
4 <sup>th</sup> year PPT	6.41 (1.37)	6.69 (1.18)	0.28 (-0.19)

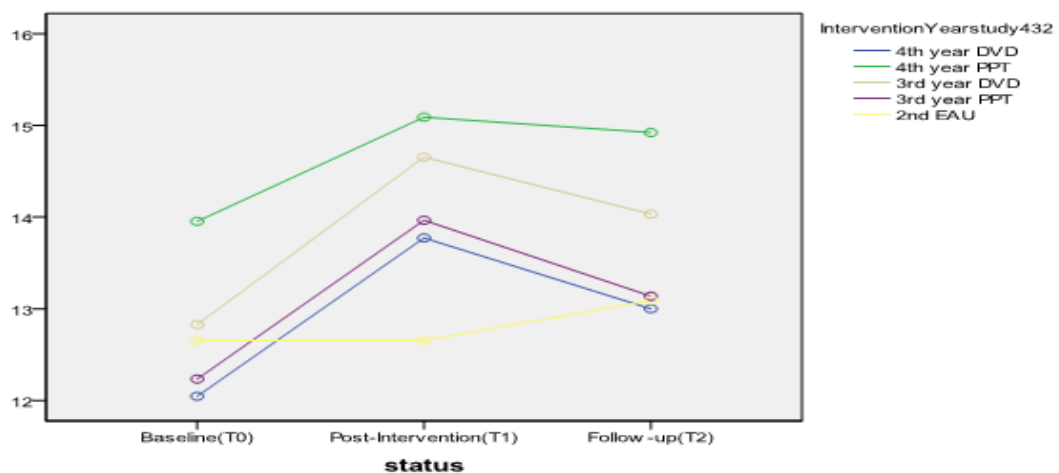
## RIBS

### RIBS Baseline

Table 7.9 and Figure 7.5 demonstrate that at baseline, the mean RIBS scores for participants in each of the three years were broadly similar, ranging from 12.05 to 12.83, with the exception of the 4<sup>th</sup> year PPT group, at 13.95. These scores indicate that students in all three years presented with similar levels of intended stigmatising behaviour in relation to willingness to interact (i.e. live, work or have a relationship) with people with mental disorders.

**Table 7.9** Comparison of mean values (with standard deviation) of RIBS outcome measure at three time points (Baseline (T0), post-intervention (T1) and follow-up (T2) between the five study groups

Outcome measure & possible range: <b>Intended behaviour (RIBS, 4-20)</b>	<b>Time point</b>		
<b>Study group</b>	<b>Baseline T0</b> Mean (s.d.)	<b>Post-intervention T1</b> Mean (s.d.)	<b>Follow-up T2</b> Mean (s.d.)
2 <sup>nd</sup> year EAU	12.65 (2.70)	12.65 (2.70)	13.09 (2.86)
3 <sup>rd</sup> year DVD	12.83 (2.11)	14.66 (3.02)	14.03 (2.88)
3 <sup>rd</sup> year PPT	12.23 (2.81)	13.97 (2.51)	13.14 (2.45)
4 <sup>th</sup> year DVD	12.05 (3.14)	13.77 (2.35)	13.00 (2.60)
4 <sup>th</sup> year PPT	13.95 (2.17)	15.09 (3.38)	14.92 (2.84)



**Figure 7.5** Mean RIBS scores in the five groups across the three time points

### *RIBS post-intervention*

Table 7.9 and Figure 7.5 also demonstrate that at post-intervention, the mean RIBS scores for participants in years 3 and 4 increased, while they remained the same for year 2. These results indicate that the 3<sup>rd</sup> and 4<sup>th</sup> year students presented with overall positive (less stigmatising) intended behaviour towards people with mental disorders in comparison to the 2<sup>nd</sup> year students at T1.

Among 3<sup>rd</sup> year students, the DVD group presented with a steeper post-intervention increase in RIBS than the PPT group, as demonstrated in Figure 7.5, and had a higher change score (1.83), as displayed in Table 7.10. Similarly, the 4<sup>th</sup> year DVD group had a higher change score (1.72) than the 4<sup>th</sup> year PPT group, as displayed in Table 7.10. Therefore, among all intervention groups, students in the 3<sup>rd</sup> year DVD group had the most positive (least stigmatising) change in intended behaviour towards people with mental disorders at T1.

**Table 7.10** Comparison of RIBS change scores between baseline and post-intervention (T1-T0) within the five study groups (2<sup>nd</sup> year EAU, 3<sup>rd</sup> year DVD, 3<sup>rd</sup> year PPT, 4<sup>th</sup> year DVD, 4<sup>th</sup> year PPT)

Outcome measure & possible range: <b>Intended behaviour (RIBS, 4-20)</b>	Time point and change score		
	<b>Baseline T0</b> Mean (s.d.)	<b>Post-intervention T1</b> Mean (s.d.)	<b>Change score (T1-T0)</b> Mean (s.d.)
2 <sup>nd</sup> year EAU	12.65 (2.70)	12.65 (2.70)	0.00 (0.00)
3 <sup>rd</sup> year DVD	12.83 (2.11)	14.66 (3.02)	1.83 (0.91)
3 <sup>rd</sup> year PPT	12.23 (2.81)	13.97 (2.51)	1.74 (-0.30)
4 <sup>th</sup> year DVD	12.05 (3.14)	13.77 (2.35)	1.72 (-0.79)
4 <sup>th</sup> year PPT	13.95 (2.17)	15.09 (3.38)	1.14 (1.21)

### *RIBS follow-up*

Table 7.11 and Figure 7.5 demonstrate that the mean RIBS scores decreased from T1 to T2 in all four groups in years 3 and 4, but they remained higher than the 2<sup>nd</sup> year T2 scores, with the exception of the 4<sup>th</sup> year DVD group, indicating overall less stigmatising intended behaviour in 3<sup>rd</sup> and 4<sup>th</sup> year students in comparison to those in the 2<sup>nd</sup> year of training at follow-up.

Within the 3<sup>rd</sup> year of training, the 3<sup>rd</sup> year PPT presented with the steepest decrease in RIBS, as demonstrated in Figure 7.5 and indicated by the change score of -0.83 in Table 7.11. The 3<sup>rd</sup> and 4<sup>th</sup> year DVD groups presented with similar rates of decrease. The 4<sup>th</sup> year PPT group's score also decreased from T1 to T2, but this was the lowest change score (-0.17). Among the intervention groups, students in the 4<sup>th</sup> year PPT group appeared to maintain the most positive (least stigmatising) intended behaviour at follow-up.

**Table 7.11** Comparison of RIBS change scores between post-intervention and follow-up (T2-T1) within the five study groups

Outcome measure & possible range: Intended behaviour (RIBS, 4-20)	Time point and change score		
Study group	Post-intervention T1 Mean (s.d.)	Follow-up T2 Mean (s.d.)	Change score (T2-T1) Mean (s.d.)
2 <sup>nd</sup> year EAU	12.65 (2.70)	13.09 (2.86)	0.44 (0.16)
3 <sup>rd</sup> year DVD	14.66 (3.02)	14.03 (2.88)	-0.63 (-0.14)
3 <sup>rd</sup> year PPT	13.97 (2.51)	13.14 (2.45)	-0.83 (-0.06)
4 <sup>th</sup> year DVD	13.77 (2.35)	13.00 (2.60)	-0.77 (0.25)
4 <sup>th</sup> year PPT	15.09 (3.38)	14.92 (2.84)	-0.17 (-0.54)



## **7.10 Inferential statistical results**

The inferential statistical results relating to objectives three to five of the exploratory trial are presented in Sections 7.10.1 to 7.10.3.

The partially confounded design resulted from DVD and PPT being administered to 3<sup>rd</sup> and 4<sup>th</sup> year students only, while the year 2 EAU group did not receive an intervention and acted as a control. Therefore the DVD and PPT interventions for year 3 were compared against EAU and this was repeated for year 4, finishing off with an analysis that compared the four intervention groups (3<sup>rd</sup> Year DVD vs. 3<sup>rd</sup> Year PPT vs. 4<sup>th</sup> Year DVD vs. 4<sup>th</sup> Year PPT).

Section 7.10.1 reports findings addressing objective three of the exploratory trial, to ascertain whether stigma at T1 differed between the two interventions (DVD, PPT) for years 3 and year 4 respectively, compared with the EAU group (e.g. 3<sup>rd</sup> Year DVD vs. EAU, 3<sup>rd</sup> Year PPT vs. EAU) and between the four intervention groups, adjusting for baseline values.

Section 7.10.2 replicates the approach in section 7.10.1 for indicators of stigma at three-month follow-up, except on this occasion adjusting for post-intervention values. Finally, Section 7.10.3 reports findings to meet objective five of the exploratory trial, which was to assess the influence of DVD and PPT on adapted CLEI in year 4.

### 7.10.1 Indicators of stigma at T1 with baseline adjustment

#### *Indicators of stigma at T1 between years 2 and 3 with baseline adjustment*

##### *MICA*

After adjusting for baseline MICA values, the data in Table 7.12 show a statistically significant difference in the mean values of MICA post-intervention ( $F(2, 110) = 44.81$ ,  $p < 0.001$ ) between years 2 and 3. Table 7.12 also shows that baseline MICA values were significantly related to the post-intervention MICA values ( $F(1, 110) = 146.51$ ,  $p < 0.001$ ).

**Table 7.12** Test of between-subjects effects at post-intervention between years 2 and 3 after adjusting for baseline MICA values

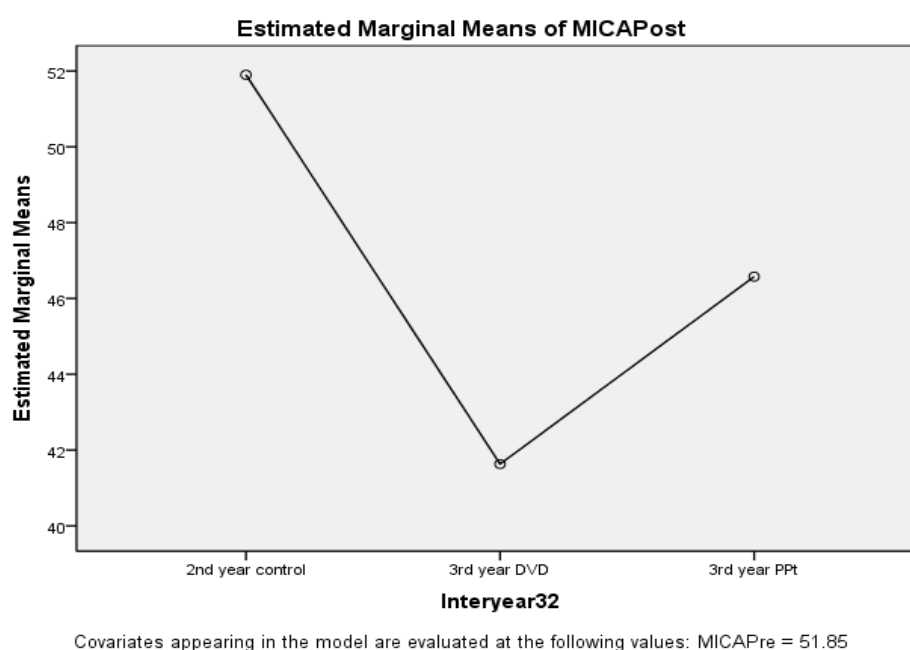
Dependent Variable: MICA Post-intervention (T1)						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	5514.692 <sup>a</sup>	3	1838.231	79.520	<0.001	0.684
Intercept	78.240	1	78.240	3.385	0.069	0.030
Interyear32	2072.218	2	1036.109	44.821	<0.001	0.449
MICAPre	3386.888	1	3386.888	146.513	<0.001	0.571
Error	2542.826	110	23.117			
Total	269467.000	114				
Corrected Total	8057.518	113				

a. R Squared = .684 (Adjusted R Squared = .676)

Table 7.13 shows the pairwise comparisons of mean MICA post-intervention values and indicates a statistically significant lower mean value in 3<sup>rd</sup> year DVD and 3<sup>rd</sup> year PPT groups, when compared with the 2<sup>nd</sup> year EAU group. Of the two educational groups, the 3<sup>rd</sup> year DVD group had a significantly lower mean MICA value, but there was no difference between the DVD and PPT groups, as demonstrated graphically in Figure 7.6.

**Table 7.13** Pairwise comparison of post-intervention mean MICA scores between years 2 and 3 (after adjusting for baseline MICA values)

Dependent variable: Post-intervention		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
Year 3 (DVD or PPT) vs. EAU	DVD vs. EAU	-10.269*	1.103	-12.952	-7.587	<0.001
	PPT vs. EAU	-5.324*	1.093	-7.981	-2.668	<0.001



**Figure 7.6** Graphical representation of the pairwise comparison of post-intervention mean MICA scores between years 2 and 3 (after adjusting for baseline MICA values)

## SCILO

After adjusting baseline SCILO values, the data in Table 7.14 show a statistically significant difference in the post-intervention mean values of SCILO ( $F(2, 110) = 55.78, p < 0.001$ ) between years 2 and 3. Table 7.14 also shows that baseline SCILO values were significantly related to the post-intervention SCILO values ( $F(1, 110) = 92.91, p < 0.001$ ).

**Table 7.14** Test of between-subjects effects at post-intervention between years 2 and 3 after adjusting for baseline SCILO values

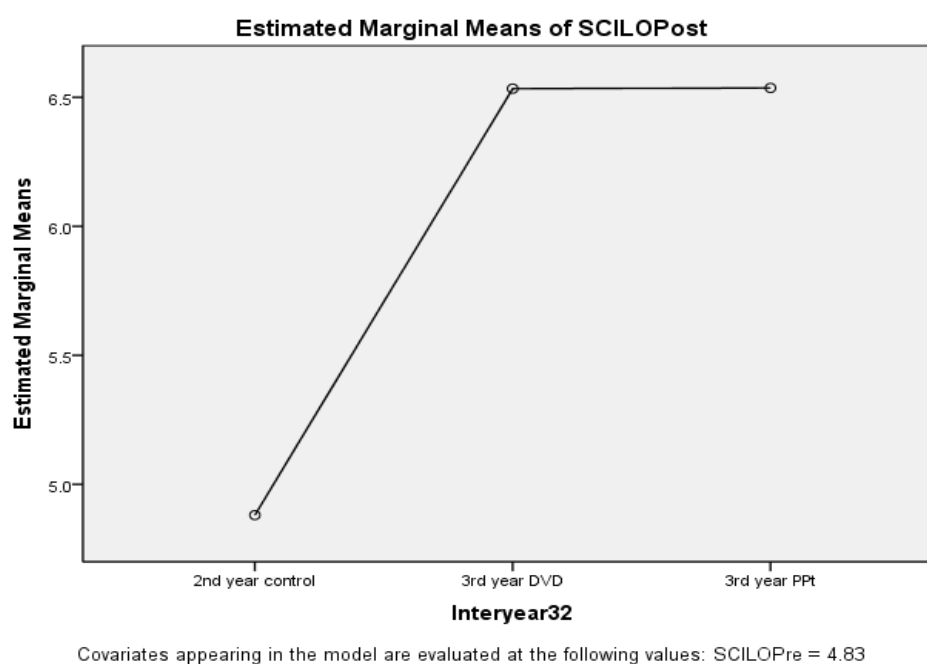
Dependent Variable: SCILO Post-intervention (T1)						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	128.174 <sup>a</sup>	3	42.725	61.895	<0.001	0.628
Intercept	54.843	1	54.843	79.450	<0.001	0.419
Interyear32	77.004	2	38.502	55.777	<0.001	0.504
SCILOPre	64.135	1	64.135	92.912	<0.001	0.458
Error	75.931	110	0.690			
Total	3956.000	114				
Corrected Total	204.105	113				

a. R Squared = .628 (Adjusted R Squared = .618)

Table 7.15 shows the pairwise comparisons of mean SCILO post-intervention values and indicates a statistically significant higher mean value in 3<sup>rd</sup> year DVD and 3<sup>rd</sup> year PPT groups, when compared with the 2<sup>nd</sup> year EAU group, as demonstrated graphically in Figure 7.7.

**Table 7.15** Pairwise comparison of post-intervention mean SCILO scores between years 2 and 3 (after adjusting for baseline SCILO values)

Dependent variable: Post-intervention		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
Year 3 (DVD or PPT) vs. EAU	DVD vs. EAU	1.653*	0.191	1.189	2.116	<0.001
	PPT vs. EAU	1.655*	0.190	1.193	2.118	<0.001



**Figure 7.7** Graphical representation of the pairwise comparison of post-intervention mean SCILO scores between years 2 and 3 (after adjusting for baseline SCILO values)

## RIBS

After adjusting baseline RIBS values, the data in Table 7.16 show a statistically significant difference in the post-intervention mean values of RIBS ( $F(2, 110) = 10.85, p < 0.001$ ) between years 2 and 3. Table 7.16 also shows that baseline RIBS values were significantly related to the post-intervention RIBS values ( $F(1, 110) = 95.88, p < 0.001$ ).

**Table 7.16** Test of between-subjects effects at post-intervention between years 2 and 3 after adjusting for baseline RIBS values

Dependent Variable: RIBS Post-intervention (T1)

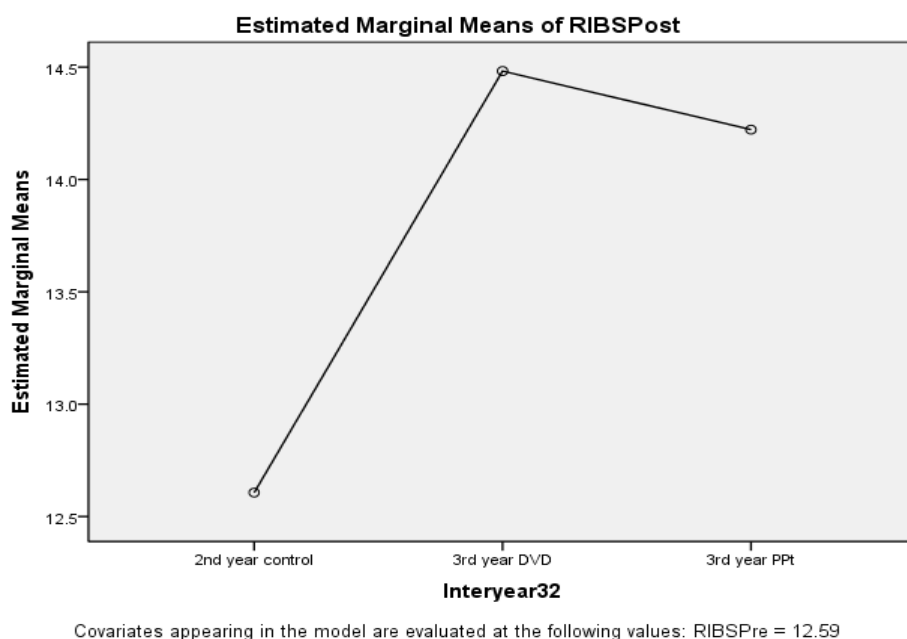
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	471.042 <sup>a</sup>	3	157.014	38.948	<0.001	0.515
Intercept	100.153	1	100.153	24.844	<0.001	0.184
Interyear32	87.506	2	43.753	10.853	<0.001	0.165
RIBSPre	386.506	1	386.506	95.875	<0.001	0.466
Error	443.449	110	4.031			
Total	21718.000	114				
Corrected Total	914.491	113				

a. R Squared = .515 (Adjusted R Squared = .502)

Table 7.17 shows the pairwise comparisons of mean RIBS post-intervention values. This shows a statistically significant higher mean value in the 3<sup>rd</sup> year DVD group when compared with the 2<sup>nd</sup> year EAU group, whereas the increase in the mean post-intervention RIBS values of the 3<sup>rd</sup> year PPT group is not significantly different from the 2<sup>nd</sup> year EAU group, as demonstrated graphically in Figure 7.8.

**Table 7.17** Pairwise comparison of post-intervention mean RIBS scores between years 2 and 3 (after adjusting for baseline RIBS values)

Dependent variable: Post-intervention		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
Year 3 (DVD or PPT) vs. EAU	DVD vs. EAU	1.876*	0.461	0.755	2.997	<0.001
	PPT vs. EAU	1.615*	0.457	0.505	2.726	0.002



**Figure 7.8** Graphical representation of the pairwise comparison of post-intervention mean RIBS scores between years 2 and 3 (after adjusting for baseline RIBS values)

*Indicators of stigma at T1 between years 2 and 4 with baseline adjustment*

*MICA*

After adjusting baseline MICA values the data in Table 7.18 show a statistically significant difference in the mean post-intervention values of MICA ( $F(2, 95) = 66.71$ ,  $p < 0.001$ ) between years 2 and 4. Table 7.18 also shows that baseline MICA values were significantly related to the post-intervention MICA values ( $F(1, 95) = 159.87$ ,  $p < 0.001$ ).

**Table 7.18** Test of between-subjects effects at post-intervention between years 2 and 4 after adjusting for baseline MICA values

Dependent Variable: MICA Post-intervention (T1)						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	4685.338 <sup>a</sup>	3	1561.779	86.082	<0.001	0.731
Intercept	100.368	1	100.368	5.532	0.021	0.055
Interyear42	2420.659	2	1210.330	66.711	<0.001	0.584
MICAPre	2900.501	1	2900.501	159.870	<0.001	0.627
Error	1723.571	95	18.143			
Total	237394.000	99				
Corrected Total	6408.909	98				

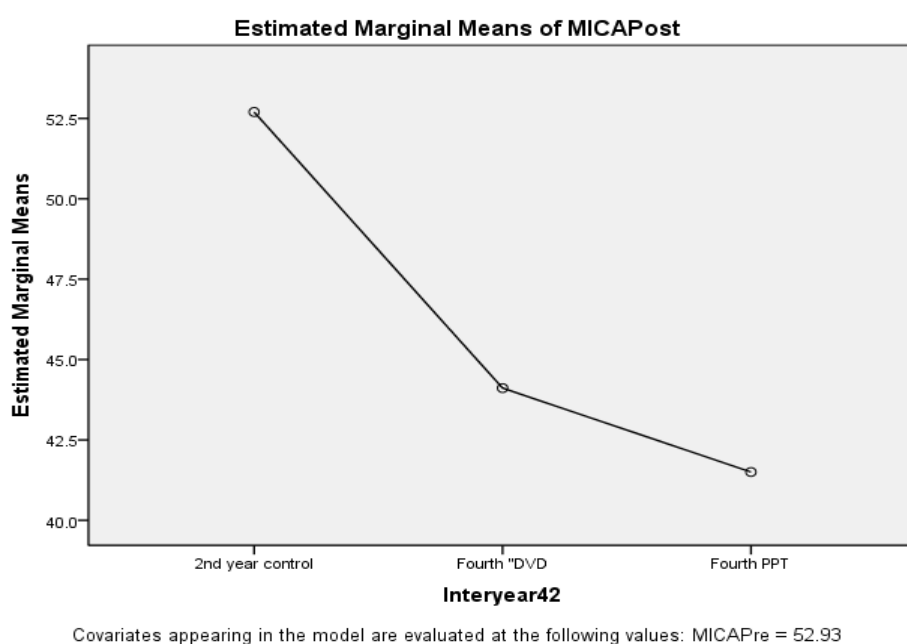
a. R Squared = .731 (Adjusted R Squared = .723)



Table 7.19 also shows the pairwise comparisons of mean MICA post-intervention values, which indicate a statistically significant lower mean value in 4<sup>th</sup> year DVD and 4<sup>th</sup> year PPT groups, when compared with the 2<sup>nd</sup> year EAU group. Of the two educational groups, the 4<sup>th</sup> year PPT group has a significantly lower mean MICA value, as demonstrated graphically in Figure 7.9.

**Table 7.19** Pairwise comparison of post-intervention mean MICA scores between years 2 and 4 (after adjusting for baseline MICA values)

Dependent variable: Post-intervention		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
Year 4 (DVD or PPT) vs. EAU	DVD vs. EAU	-8.588*	1.077	-11.212	-5.964	<0.001
	PPT vs. EAU	-11.198*	1.085	-13.843	-8.553	<0.001



**Figure 7.9** Graphical representation of the pairwise comparison of post-intervention mean MICA scores between years 2 and 4 (after adjusting for baseline MICA values)

## SCILO

After adjusting baseline SCILO values the data in Table 7.20 show no statistically significant difference in the mean post-intervention values of SCILO ( $F(2, 95) = 69.97$ ,  $p < 0.001$ ) between years 2 and 4. Table 7.20 also shows that baseline SCILO values were significantly related to the post-intervention SCILO values ( $F(1, 95) = 106.24$ ,  $p < 0.001$ ).

**Table 7.20** Test of between-subjects effects at post-intervention between years 2 and 4 after adjusting for baseline SCILO values

Dependent Variable: SCILO Post-intervention (T1)

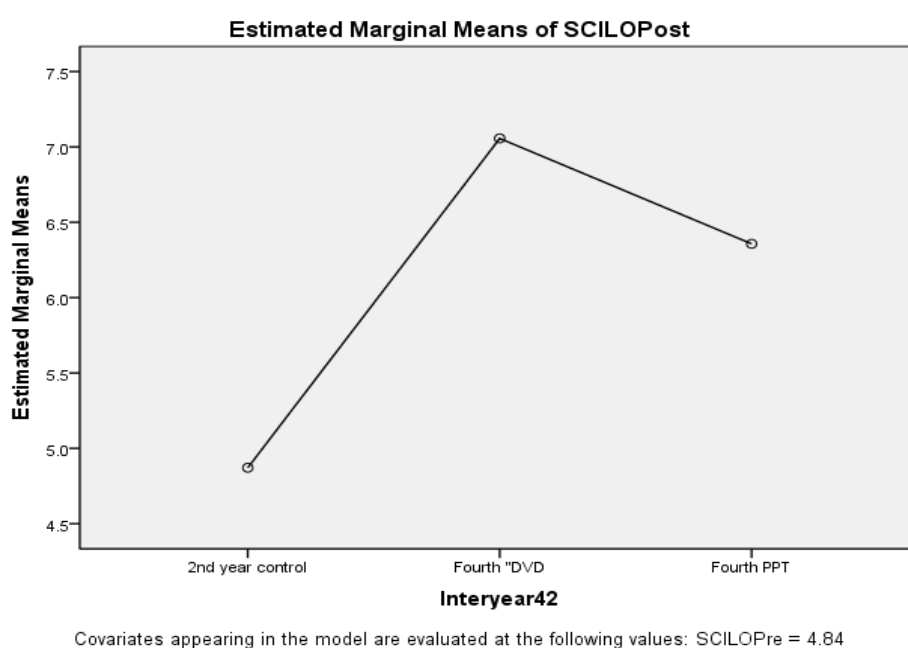
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	131.177 <sup>a</sup>	3	43.726	71.477	<0.001	0.693
Intercept	31.262	1	31.262	51.103	<0.001	0.350
Interyear42	85.611	2	42.806	69.973	<0.001	0.596
SCILOPre	64.993	1	64.993	106.242	<0.001	0.528
Error	58.116	95	0.612			
Total	3391.000	99				
Corrected Total	189.293	98				

a. R Squared = .693 (Adjusted R Squared = .683)

Table 7.21 also shows the pairwise comparisons of mean SCILO post-intervention values and indicates a statistically significant higher mean value in 4<sup>th</sup> year DVD and 4<sup>th</sup> year PPT groups, when compared with the 2<sup>nd</sup> year EAU group, as demonstrated graphically in Figure 7.10.

**Table 7.21** Pairwise comparison of post-intervention mean SCILO scores between years 2 and 4 (after adjusting for baseline SCILO values)

Dependent variable: Post-intervention		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
Year 4 (DVD or PPT) vs. EAU	DVD vs. EAU	-2.185*	0.201	1.696	2.674	<0.001
	PPT vs. EAU	1.486*	0.197	1.005	1.967	<0.001



**Figure 7.10** Graphical representation of the pairwise comparison of post-intervention mean SCILO scores between years 2 and 4 (after adjusting for baseline SCILO values)

## RIBS

After adjusting baseline RIBS values, the data in Table 7.22 show a statistically significant difference in the mean post-intervention values of RIBS ( $F(2, 95) = 10.42$ ,  $p < 0.001$ ) between years 2 and 4. Table 7.22 also shows that baseline RIBS values were significantly related to the post-intervention RIBS values ( $F(1, 95) = 189.21$ ,  $p < 0.001$ ).

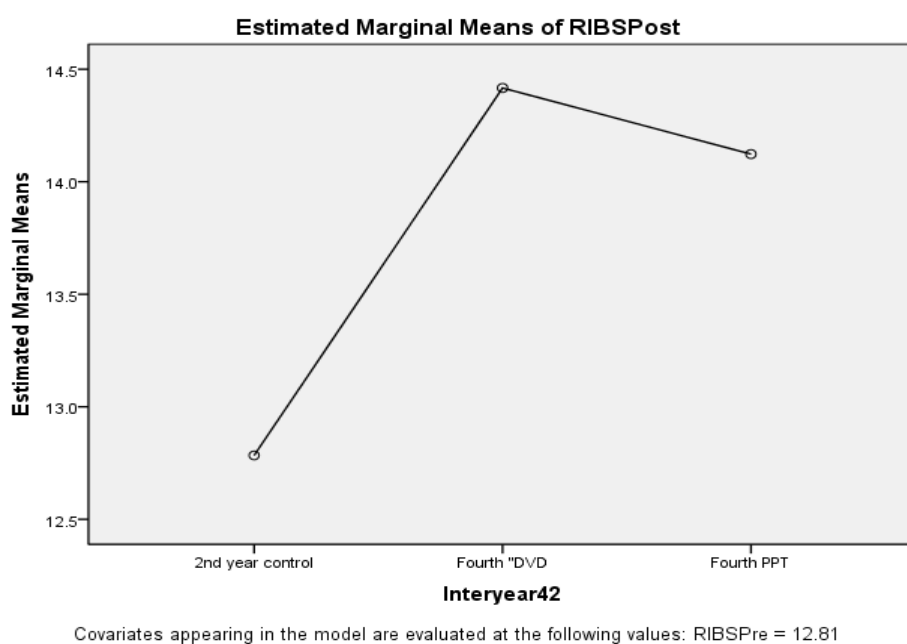
**Table 7.22** Test of between-subjects effects at post-intervention between years 2 and 4 after adjusting for baseline RIBS values

Dependent Variable: RIBS Post-intervention (T1)						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	594.376 <sup>a</sup>	3	198.125	75.267	<0.001	0.704
Intercept	35.022	1	35.022	13.305	<0.001	0.123
Interyear42	54.841	2	27.420	10.417	<0.001	0.180
RIBSPre	498.049	1	498.049	189.207	<0.001	0.666
Error	250.069	95	2.632			
Total	18739.000	99				
Corrected Total	844.444	98				

Table 7.23 shows the pairwise comparisons of mean RIBS post-intervention values which indicate a statistically significant higher mean value in 4<sup>th</sup> year PPT and 4<sup>th</sup> year DVD groups when compared with the 2<sup>nd</sup> year EAU group and is demonstrated graphically in Figure 7.11.

**Table 7.23** Pairwise comparison of post-intervention mean RIBS scores between years 2 and 4 (after adjusting for baseline RIBS values)

Dependent variable: Post-intervention		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
Year 4 (DVD or PPT) vs. EAU	DVD vs. EAU	1.633*	0.411	0.631	2.634	<0.001
	PPT vs. EAU	1.339*	0.417	0.322	2.355	0.005



**Figure 7.11** Graphical representation of the pairwise comparison of post-intervention mean RIBS scores between years 2 and 4 (after adjusting baseline RIBS values)

***Indicators of stigma at T1 between years 4 and 3 with baseline adjustment***

***MICA***

After adjusting baseline MICA values, the data in Table 7.24 show a statistically significant difference in the mean post-intervention values of MICA ( $F(3, 98)=4.04$ ,  $p=0.009$ ) between the four groups (3<sup>rd</sup> year DVD, 3<sup>rd</sup> year PPT, 4<sup>th</sup> year DVD, 4<sup>th</sup> year PPT). Table 7.24 also shows that baseline MICA values were significantly related to the post-intervention MICA values ( $F(1, 98)=58.67$ ,  $p<0.001$ ).

**Table 7.24** Test of between-subjects effects at post-intervention between years 4 and 3 after adjusting for baseline MICA values

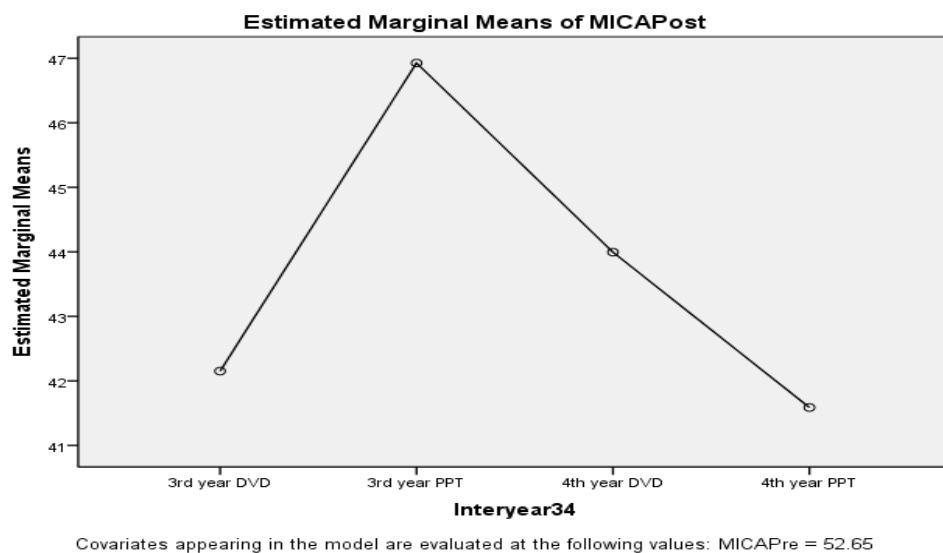
Dependent Variable: MICA Post-intervention (T1)						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2590.834 <sup>a</sup>	4	647.708	16.553	<0.001	0.403
Intercept	356.255	1	356.255	9.105	0.003	0.085
Interyear34	473.972	3	157.991	4.038	0.009	0.110
MICAPre	2295.707	1	2295.707	58.670	<0.001	0.374
Error	3834.662	98	39.129			
Total	204165.000	103				
Corrected Total	6425.495	102				

a. R Squared = .403 (Adjusted R Squared = .379)

Table 7.25 shows the pairwise comparison of mean values indicating a statistically significant difference in the mean post-intervention MICA values of the 3<sup>rd</sup> year DVD and PPT groups (difference = -4.945,  $p < 0.001$ ) and a significant difference (5.338,  $p = 0.020$ ) between 3<sup>rd</sup> year and 4<sup>th</sup> year PPT groups. Table 7.25 also shows that the mean post-intervention MICA value of the 3<sup>rd</sup> year PPT group was statistically significantly higher than that of the 4<sup>th</sup> year PPT group. However, there were no other statistically significant pairwise comparisons, as demonstrated graphically in Figure 7.12.

**Table 7.25** Pairwise comparison of post-intervention mean MICA scores between years 4 and 3 (after adjusting for baseline MICA values)

Dependent variable: Post-intervention		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
DVD and PPT comparisons within and across Year3 and Year 4	3 <sup>rd</sup> DVD vs. 3 <sup>rd</sup> PPT	-4.945*	1.253	-7.992	-1.897	<0.001
	3 <sup>rd</sup> DVD vs. 4 <sup>th</sup> DVD	-1.843	1.771	-6.612	2.925	1.000
	3 <sup>rd</sup> DVD vs. 4 <sup>th</sup> PPT	.564	1.780	-4.230	5.358	1.000
	3 <sup>rd</sup> PPT vs. 4 <sup>th</sup> DVD	2.931	1.763	-1.817	7.679	0.598
	3 <sup>rd</sup> PPT vs. 4 <sup>th</sup> PPT	5.338*	1.777	0.553	10.123	0.020
	4 <sup>th</sup> PPT vs. 4 <sup>th</sup> DVD	-2.610	1.287	-5.747	0.526	0.136



**Figure 7.12** Graphical representation of the pairwise comparison of post-intervention mean MICA scores between years 4 and 3 (after adjusting for baseline MICA values)

## SCILO

After adjusting baseline SCILO values, the data in Table 7.26 show no statistically significant difference in the post-intervention mean values of SCILO ( $F(3, 98)=1.10$ ,  $p=0.351$ ) between years 4 and 3. Table 7.26 also shows that baseline SCILO values were significantly related to the post-intervention SCILO values ( $F(1, 98)=14.25$ ,  $p<0.001$ ).

**Table 7.26** Test of between-subjects effects at post-intervention between years 4 and 3 after adjusting for baseline SCILO values

Dependent Variable: SCILO Post-intervention (T1)						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	17.553 <sup>a</sup>	4	4.388	4.128	0.004	0.144
Intercept	140.171	1	140.171	131.862	<0.001	0.574
Interyear34	3.521	3	1.174	1.104	0.351	0.033
SCILOPre	15.145	1	15.145	14.248	<0.001	0.127
Error	104.176	98	1.063			
Total	4493.000	103				
Corrected Total	121.728	102				

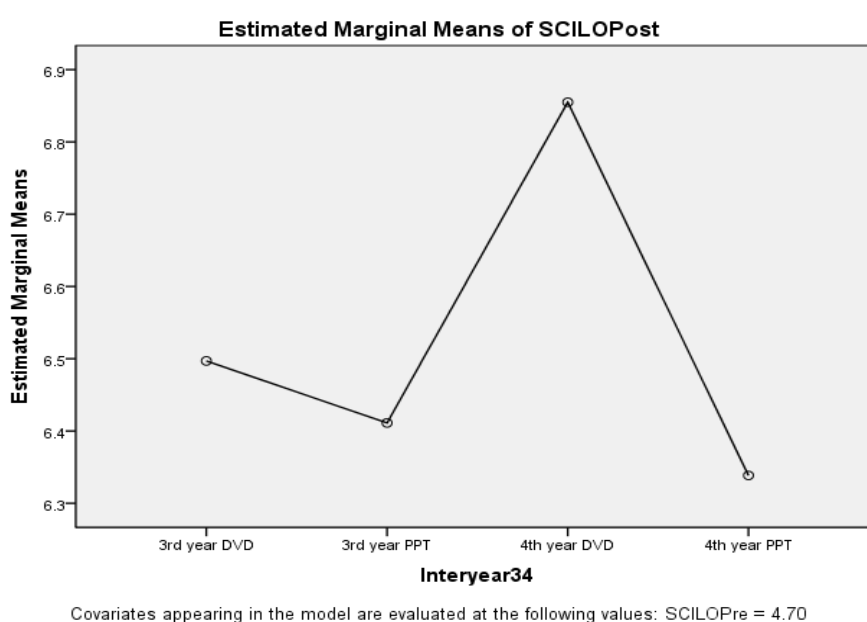
a. R Squared = .144 (Adjusted R Squared = .109)



Table 7.27 shows the pairwise comparison of mean values, indicating a statistically significant difference in the mean SCILO post-intervention values of 3<sup>rd</sup> year DVD and 3<sup>rd</sup> PPT groups (difference = 1.653,  $p < 0.001$ ) and between 3<sup>rd</sup> year DVD and 4<sup>th</sup> year DVD intervention groups (difference = 1.655,  $p < 0.001$ ). However, there was no other statistically significant difference in pairwise comparisons, as demonstrated graphically in Figure 7.13.

**Table 7.27** Pairwise comparison of post-intervention mean SCILO scores between years 4 and 3 (after adjusting for baseline SCILO values)

Dependent variable: Post-intervention		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
<b>DVD and PPT comparisons within and across Year3 and Year 4</b>	3 <sup>rd</sup> DVD vs. 3 <sup>rd</sup> PPT	1.653*	0.191	1.189	2.116	<0.001
	3 <sup>rd</sup> DVD vs. 4 <sup>th</sup> DVD	1.655*	0.190	1.193	2.118	<0.001
	3 <sup>rd</sup> DVD vs. 4 <sup>th</sup> PPT	-0.003	0.217	-0.531	0.525	1.000
	3 <sup>rd</sup> PPT vs. 4 <sup>th</sup> DVD	-0.358	0.294	-1.149	0.433	1.000
	3 <sup>rd</sup> PPT vs. 4 <sup>th</sup> PPT	0.158	0.292	-0.627	0.943	1.000
	4 <sup>th</sup> PPT vs. 4 <sup>th</sup> DVD	-0.444	0.290	-1.224	0.336	0.772



**Figure 7.13** Graphical representation of the pairwise comparison of post-intervention mean SCILO scores between years 4 and 3 (after adjusting for baseline SCILO values)

## RIBS

After adjusting baseline RIBS values, the data in Table 7.28 show no statistically significant difference in the mean post-intervention values of RIBS ( $F(3, 98)=0.19$ ,  $p=0.903$ ) between years 4 and 3. Table 7.28 also shows that baseline RIBS values were significantly related to post-intervention RIBS values ( $F(1, 98)=28.19$ ,  $p<0.001$ ).

**Table 7.28** Test of between-subjects effects at T1 between years 4 and 3 after adjusting for baseline RIBS values

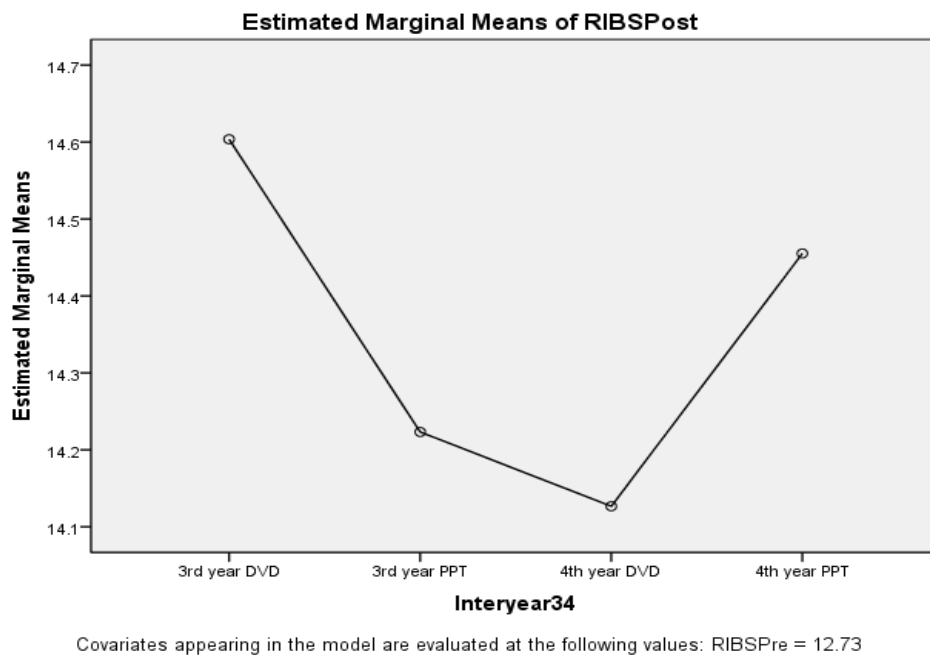
Dependent Variable: RIBS Post-intervention (T1)						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	203.705 <sup>a</sup>	4	50.926	8.102	<0.001	0.249
Intercept	233.922	1	233.922	37.215	<0.001	0.275
Interyear34	3.571	3	1.190	0.189	0.903	0.006
RIBSPre	177.197	1	177.197	28.190	<0.001	0.223
Error	616.003	98	6.286			
Total	22057.000	103				
Corrected Total	819.709	102				

a. R Squared = .249 (Adjusted R Squared = .218)

Table 7.29 shows no statistically significant pairwise comparison, as demonstrated graphically in Figure 7.14.

**Table 7.29** Pairwise comparison of post-intervention mean RIBS scores between years 4 and 3 (after adjusting baseline RIBS values)

Dependent variable: Post-intervention		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
<b>DVD and PPT comparisons within and across Year3 and Year 4</b>	3 <sup>rd</sup> DVD vs. 3 <sup>rd</sup> PPT	0.261	0.525	-1.015	1.536	1.000
	3 <sup>rd</sup> DVD vs. 4 <sup>th</sup> DVD	0.477	0.713	-1.443	2.397	1.000
	3 <sup>rd</sup> DVD vs. 4 <sup>th</sup> PPT	0.148	0.717	-1.783	2.080	1.000
	3 <sup>rd</sup> PPT vs. 4 <sup>th</sup> DVD	0.097	0.704	-1.799	1.992	1.000
	3 <sup>rd</sup> PPT vs. 4 <sup>th</sup> PPT	-0.232	0.724	-2.180	1.716	1.000
	4 <sup>th</sup> PPT vs. 4 <sup>th</sup> DVD	-0.294	0.503	-1.520	0.932	1.000



**Figure 7.14** Graphical representation of the pairwise comparison of post-intervention mean RIBS scores between years 4 and 3 (after adjusting baseline RIBS values)

### 7.10.2 Indicators of stigma at follow-up with post-intervention adjustment

*Indicators of stigma at T2 between years 2 and 3 with post-intervention adjustment*

#### *MICA*

After adjusting for post-intervention MICA values, the data in Table 7.30 show no statistically significant difference ( $F(2,108) = 0.308, p = 0.74$ ) in the mean values of MICA at follow-up between years 2 and 3. Table 7.30 also shows that post-intervention MICA values were significantly related ( $F(1,108) = 79.30.136, p < 0.001$ ) to the MICA follow-up values.

**Table 7.30** Test of between-subjects effects at follow-up between years 2 and 3 after adjusting for post-intervention MICA values

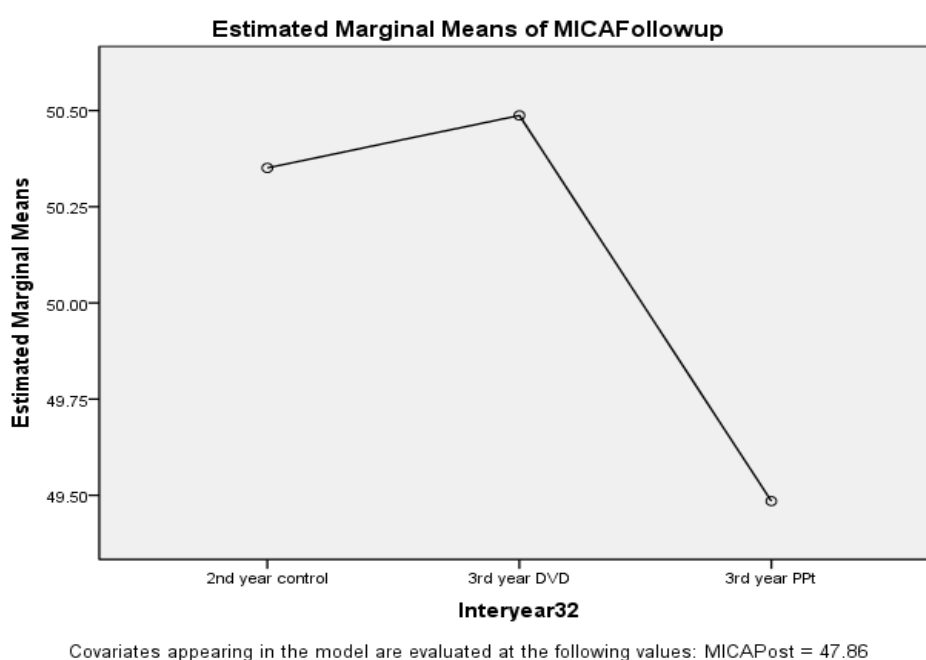
Dependent Variable: MICA Follow-up (T2)						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3176.641 <sup>a</sup>	3	1058.880	36.664	<0.001	0.505
Intercept	1081.607	1	1081.607	37.451	<0.001	0.257
Interyear32	17.782	2	8.891	0.308	0.736	0.006
MICAPost	2290.354	1	2290.354	79.303	<0.001	0.423
Error	3119.136	108	28.881			
Total	288199.000	112				
Corrected Total	6295.777	111				

a. R Squared = .505 (Adjusted R Squared = .491)

Table 7.31 shows the pairwise comparisons of mean MICA follow-up values in which 3<sup>rd</sup> year DVD and 3<sup>rd</sup> year PPT groups are not significantly different from the 2<sup>nd</sup> year EAU group, as demonstrated graphically in Figure 7.15.

**Table 7.31** Pairwise comparison of mean follow-up MICA scores between years 2 and 3 (after adjusting for post-intervention MICA values)

Dependent variable: Follow-up		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
Year 3 (DVD or PPT) vs. EAU						
	DVD vs. EAU	0.136	1.427	-3.334	3.607	1.000
	PPT vs. EAU	-0.866	1.322	-4.082	2.350	1.000



**Figure 7.15** Graphical representation of the pairwise comparison of post-intervention mean MICA scores between years 2 and 3 (after adjusting for post-intervention MICA values)

### SCILO

After adjusting for post-intervention SCILO values, the data in Table 7.32 show no statistically significant difference ( $F(2,108) = 2.30, p = 0.105$ ) in the mean follow-up values of SCILO between years 2 and 3. Table 7.32 also shows that post-intervention SCILO values were significantly related ( $F(1,108) = 29.73, p < 0.001$ ) to the SCILO follow-up values.

**Table 7.32** Test of between-subjects effects at follow-up between years 2 and 3 after adjusting for post-intervention SCILO values

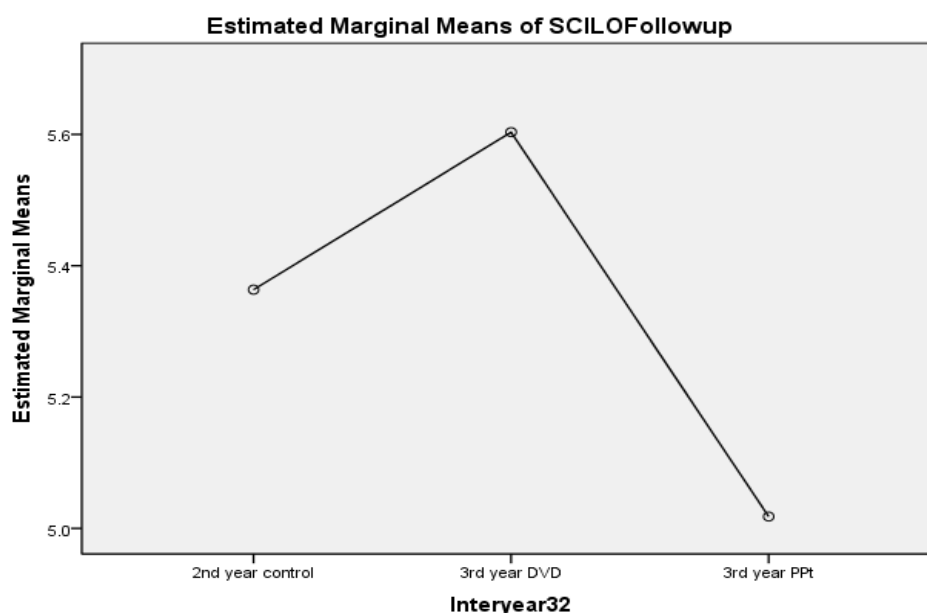
Dependent Variable: SCILO Follow-up (T2)						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	50.967 <sup>a</sup>	3	16.989	15.798	<0.001	0.305
Intercept	25.370	1	25.370	23.591	<0.001	0.179
Interyear32	4.946	2	2.473	2.299	0.105	0.041
SCILOPost	31.967	1	31.967	29.727	<0.001	0.216
Error	116.140	108	1.075			
Total	3360.000	112				
Corrected Total	167.107	111				

a. R Squared = .305 (Adjusted R Squared = .286)

Table 7.33 shows the pairwise comparisons of mean SCILO follow-up values in which 3<sup>rd</sup> year DVD and 3<sup>rd</sup> year PPT groups are not significantly different from the 2<sup>nd</sup> year EAU group, as demonstrated graphically in Figure 7.16.

**Table 7.33** Pairwise comparison of mean follow-up SCILO scores between years 2 and 3 (after adjusting for post-intervention SCILO values)

Dependent variable: Follow-up		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
Year 3 (DVD or PPT) vs. EAU	DVD vs. EAU	0.240	0.276	-0.431	0.911	1.000
	PPT vs. EAU	-0.346	0.270	-1.002	0.311	0.610



Covariates appearing in the model are evaluated at the following values: SCILOPost = 5.72

**Figure 7.16** Graphical representation of the pairwise comparison of mean follow-up SCILO scores between years 2 and 3 (after adjusting for post-intervention SCILO values)

### *RIBS*

After adjusting for post-intervention RIBS values, the data in Table 7.34 show no statistically significant difference ( $F(2,108) = 0.56$ ,  $p = 0.576$ ) in the mean follow-up values of RIBS between years 2 and 3. Table 7.34 also shows that post-intervention RIBS values were significantly related ( $F(1,108) = 58.42$ ,  $p < 0.001$ ) to the RIBS follow-up values.

**Table 7.34** Test of between-subjects effects at follow-up between years 2 and 3 after adjusting for post-intervention RIBS values

Dependent Variable: RIBS Follow-up (T2)						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	317.290 <sup>a</sup>	3	105.763	20.951	<0.001	0.368
Intercept	110.549	1	110.549	21.899	<0.001	0.169
Interyear32	5.602	2	2.801	0.555	0.576	0.010
RIBSPost	294.899	1	294.899	58.417	<0.001	0.351
Error	545.201	108	5.048			
Total	20925.000	112				
Corrected Total	862.491	111				

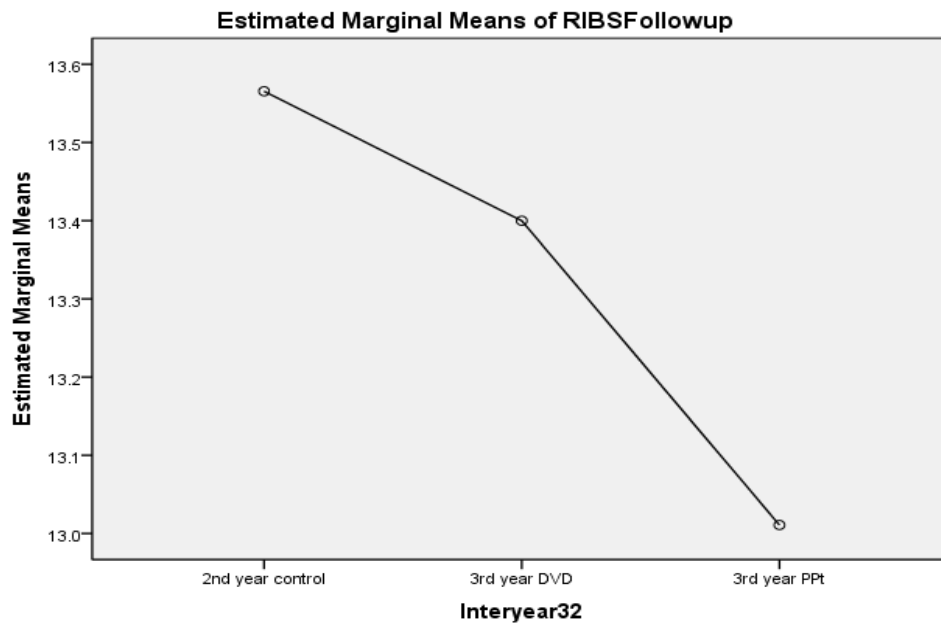
a. R Squared = .368 (Adjusted R Squared = .350)



Table 7.35 shows the pairwise comparisons of mean RIBS follow-up values in which 3<sup>rd</sup> year DVD and 3<sup>rd</sup> year PPT groups are not significantly different from the 2<sup>nd</sup> year EAU group, as demonstrated graphically in Figure 7.17.

**Table 7.35** Pairwise comparison of mean follow-up RIBS scores between years 2 and 3 (after adjusting post-intervention RIBS values)

Dependent variable: Follow-up		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
Year 3 (DVD or PPT) vs. EAU	DVD vs. EAU	-0.166	0.539	-1.478	1.146	1.000
	PPT vs. EAU	-0.555	0.528	-1.839	0.730	0.888



Covariates appearing in the model are evaluated at the following values: RIBSPost = 13.44

**Figure 7.17** Graphical representation of pairwise comparison of mean follow-up RIBS scores between years 2 and 3 (after adjusting for post-intervention RIBS values)

***Indicators of stigma at T2 between years 2 and 4 with post-intervention adjustment***

***MICA***

After adjusting for post-intervention MICA the data in Table 7.36 shows a statistically significant difference ( $F(2,83) = 3.29, p = 0.042$ ) in the mean values of MICA at follow-up between years 2 and 4. Table 7.36 also shows that post-intervention MICA values were significantly related ( $F(1,83) = 79.77, p < 0.001$ ) to the MICA follow-up values.

**Table 7.36** Test of between-subjects effects at follow-up between years 2 and 4 after adjusting for post-intervention MICA values

**Tests of Between-Subjects Effects**

Dependent Variable: MICA Follow-up (T2)

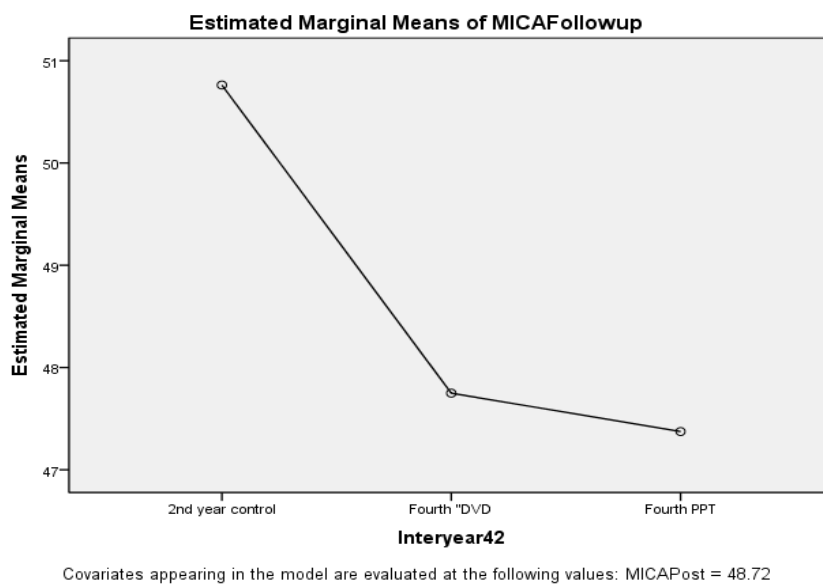
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3527.682 <sup>a</sup>	3	1175.894	54.548	<0.001	0.663
Intercept	484.502	1	484.502	22.475	<0.001	0.213
Interyear42	142.006	2	71.003	3.294	0.042	0.074
MICAPost	1719.671	1	1719.671	79.773	<0.001	0.490
Error	1789.238	83	21.557			
Total	219331.000	87				
Corrected Total	5316.920	86				

a. R Squared = .663 (Adjusted R Squared = .651)

Table 7.37 shows the pairwise comparisons of mean MICA follow-up values in which 4<sup>th</sup> year DVD and 4<sup>th</sup> year PPT groups are not significantly different from the 2<sup>nd</sup> year EAU group as demonstrated graphically in Figure 7.18.

**Table 7.37** Pairwise comparison of mean follow-up MICA scores between years 2 and 4 (after adjusting for post-intervention MICA values)

Dependent variable: Follow-up		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
Year 4 (DVD or PPT) vs. EAU	DVD vs. EAU	-3.013	1.345	-6.301	0.275	0.083
	PPT vs. EAU	-3.388	1.683	-7.501	0.724	0.142



**Figure 7.18** Graphical representation of the pairwise comparison of mean follow-up MICA scores between years 2 and 4 (after adjusting for post-intervention MICA values)

### SCILO

After adjusting for post-intervention SCILO values the data in Table 7.38 show a statistically significant difference ( $F(2,83) = 3.10, p = 0.050$ ) in the mean values of SCILO at follow-up between years 2 and 4. Table 7.38 also shows that post-intervention SCILO values were significantly related ( $F(1,83) = 54.54, p < 0.001$ ) to the SCILO follow-up values.

**Table 7.38** Test of between-subjects effects at follow-up between years 2 and 4 after adjusting for post-intervention SCILO values

Dependent Variable: SCILO Follow-up (T2)

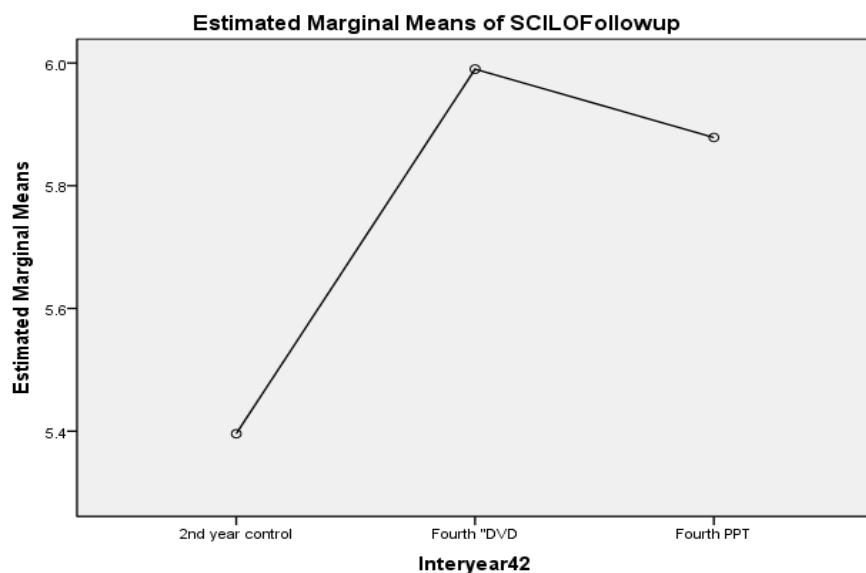
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	86.590 <sup>a</sup>	3	28.863	47.599	<0.001	0.632
Intercept	15.761	1	15.761	25.992	<0.001	0.238
Interyear42	3.762	2	1.881	3.102	0.050	0.070
SCILOPost	33.071	1	33.071	54.538	<0.001	0.397
Error	50.330	83	0.606			
Total	2863.000	87				
Corrected Total	136.920	86				

a. R Squared = .632 (Adjusted R Squared = .619)

Table 7.39 shows the pairwise comparisons of mean SCILO follow-up values in which 4<sup>th</sup> year DVD and 4<sup>th</sup> year PPT mean values are not significantly different the 2<sup>nd</sup> year EAU group, as demonstrated graphically in Figure 7.19.

**Table 7.39** Pairwise comparison of mean follow-up SCILO scores between years 2 and 4 (after adjusting for post-intervention SCILO values)

Dependent variable: Follow-up		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
Year 4 (DVD or PPT) vs. EAU	DVD vs. EAU	0.594	0.246	-0.008	1.196	0.054
	PPT vs. EAU	0.483	0.291	-0.227	1.193	0.302



Covariates appearing in the model are evaluated at the following values: SCILOPost = 5.66

**Figure 7.19** Graphical representation of the pairwise comparison of mean follow-up SCILO scores between years 2 and 4 (after adjusting for post-intervention SCILO values)

### *RIBS*

After adjusting for post-intervention RIBS values, the data in Table 7.40 show no statistically significant difference ( $F(2,83) = 1.26, p = 0.290$ ) in the mean follow-up values of RIBS between years 2 and 4. Table 7.40 also shows that the post-intervention RIBS values were significantly related ( $F(1,83) = 50.81, p < 0.001$ ) to the RIBS follow-up values.

**Table 7.40** Test of between-subjects effects at follow-up between years 2 and 4 after adjusting for post-intervention RIBS values

Dependent Variable: RIBS Follow-up (T2)

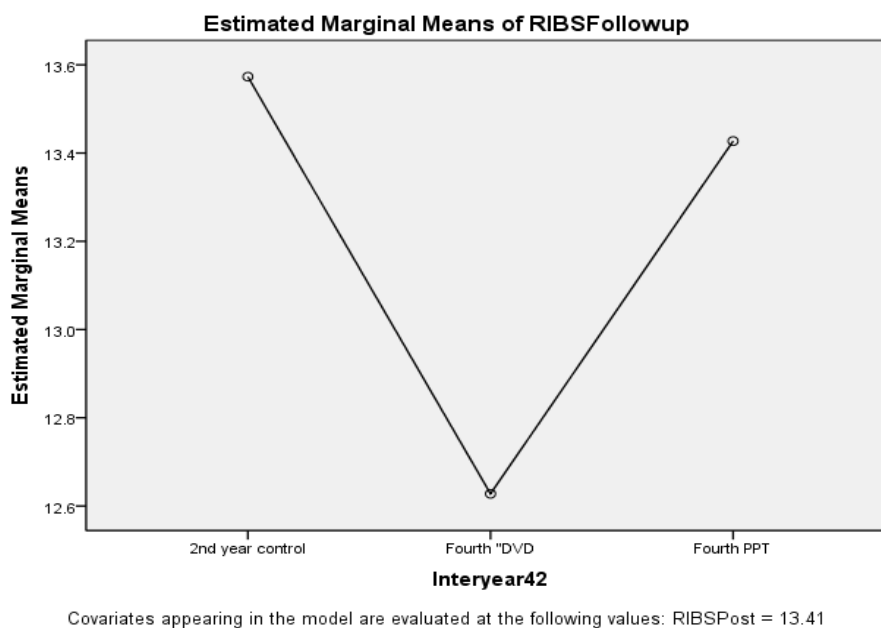
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	289.361 <sup>a</sup>	3	96.454	19.512	<0.001	0.414
Intercept	65.178	1	65.178	13.185	<0.001	0.137
Interyear42	12.418	2	6.209	1.256	0.290	0.029
RIBSPost	251.175	1	251.175	50.811	<0.001	0.380
Error	410.294	83	4.943			
Total	16193.000	87				
Corrected Total	699.655	86				

a. R Squared = .414 (Adjusted R Squared = .392)

Table 7.41 shows the pairwise comparisons of mean RIBS follow-up values, in which 4<sup>th</sup> year DVD and 4<sup>th</sup> year PPT mean values are not significantly different from the 2<sup>nd</sup> year EAU group, as demonstrated graphically in Figure 7.20.

**Table 7.41** Pairwise comparison of mean follow-up RIBS scores between years 2 and 4 (after adjusting for post-intervention RIBS values)

Dependent variable: Follow-up		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
Year 4 (DVD or PPT) vs. EAU	DVD vs. EAU	-0.945	0.604	-2.420	0.530	0.363
	PPT vs. EAU	-0.146	0.740	-1.953	1.661	1.000



**Figure 7.20** Graphical representation of the pairwise comparison of mean follow-up RIBS scores between years 2 and 4 (after adjusting for post-intervention RIBS values)

***Indicators of stigma at follow-up (T2) between years 4 and 3 with post-intervention adjustment***

***MICA***

After adjusting for post-intervention MICA values, the data in Table 7.42 show a statistically significant difference ( $F(3,83)=2.41$ ,  $p=0.072$ ) in the mean follow-up values of MICA between years 4 and 3. Table 7.42 also shows that the post-intervention MICA values were significantly related ( $F(1,83)=30.00$ ,  $p<0.001$ ) to the MICA follow-up values.

**Table 7.42** Test of between-subjects effects at follow-up between years 4 and 3 after adjusting for post-intervention MICA values

Dependent Variable: MICA Follow-up (T2)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1406.073 <sup>a</sup>	4	351.518	10.522	<0.001	0.334
Intercept	1998.543	1	1998.543	59.822	<0.001	0.416
Interyear34	241.812	3	80.604	2.413	0.072	0.079
MICAPost	1002.126	1	1002.126	29.996	<0.001	0.263
Error	2806.309	84	33.408			
Total	193642.000	89				
Corrected Total	4212.382	88				

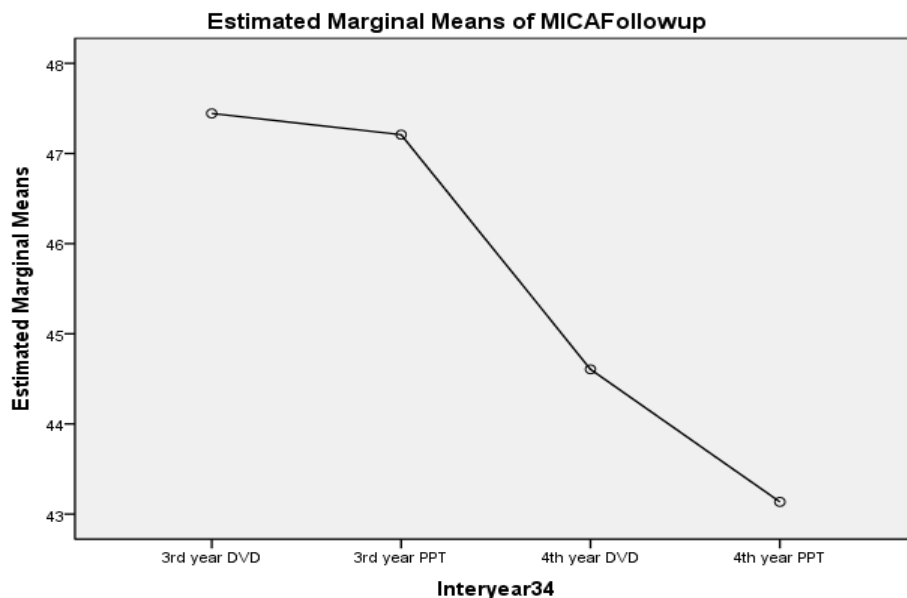
a. R Squared = .334 (Adjusted R Squared = .302)



Table 7.43 shows the pairwise comparison of mean MICA follow-up values, indicating no statistically significant difference between the mean values of the four study groups (3<sup>rd</sup> year PPT, 3<sup>rd</sup> year DVD, 4<sup>th</sup> year PPT and 4<sup>th</sup> year DVD), as demonstrated graphically in Figure 7.21.

**Table 7.43** Pairwise comparison of post-intervention mean MICA scores between years 4 and 3 (after adjusting for post-intervention MICA values)

Dependent variable: Follow-up		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
<b>DVD and PPT comparisons within and across Year3 and Year 4</b>	3 <sup>rd</sup> DVD vs. 3 <sup>rd</sup> PPT	1.002	1.451	-2.526	4.531	1.000
	3 <sup>rd</sup> DVD vs. 4 <sup>th</sup> DVD	2.839	1.723	-1.817	7.495	0.619
	3 <sup>rd</sup> DVD vs. 4 <sup>th</sup> PPT	4.309	1.934	-0.917	9.534	0.171
	3 <sup>rd</sup> PPT vs. 4 <sup>th</sup> DVD	2.603	1.720	-2.043	7.250	0.803
	3 <sup>rd</sup> PPT vs. 4 <sup>th</sup> PPT	4.074	1.991	-1.306	9.453	0.263
	4 <sup>th</sup> PPT vs. 4 <sup>th</sup> DVD	-0.375	1.708	-4.548	3.798	1.000



Covariates appearing in the model are evaluated at the following values: MICAPost = 43.49

**Figure 7.21** Graphical representation of the pairwise comparison of mean follow-up MICA scores between years 4 and 3 (after adjusting for post-intervention MICA values)

### SCILO

After adjusting for post-intervention SCILO values, the data in Table 7.44 show a statistically significant difference ( $F(3,84)=4.61$ ,  $p=0.005$ ) in the mean follow-up values of SCILO between years 4 and 3. Table 7.44 also shows that the post-intervention SCILO values were significantly related ( $F(1,84)=10.60$ ,  $p=0.002$ ) to the follow-up SCILO values.

**Table 7.44** Test of between-subjects effects at follow-up between years 4 and 3 after adjusting for post-intervention SCILO values

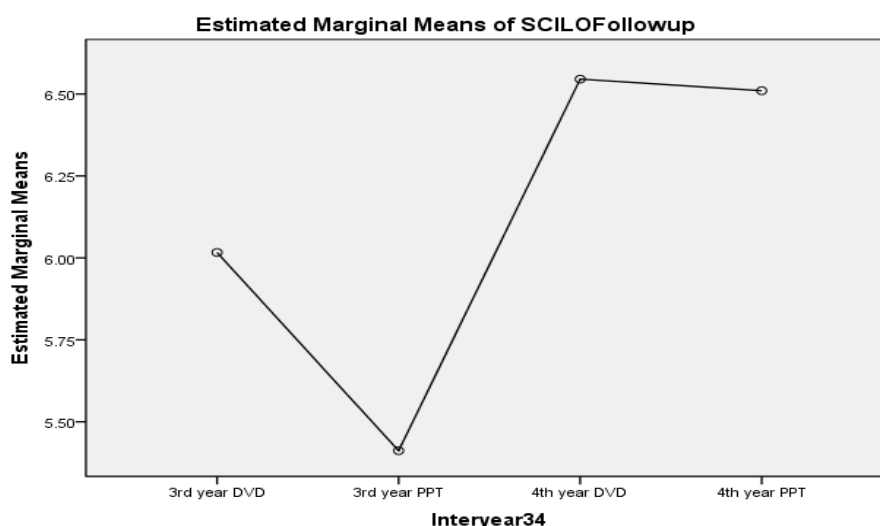
Dependent Variable: SCILO Follow-up (T2)						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	39.319 <sup>a</sup>	4	9.830	7.529	<0.001	0.264
Intercept	27.808	1	27.808	21.299	<0.001	0.202
Interyear34	18.090	3	6.030	4.619	0.005	0.142
SCILOPost	13.838	1	13.838	10.599	0.002	0.112
Error	109.670	84	1.306			
Total	3365.000	89				
Corrected Total	148.989	88				

a. R Squared = .264 (Adjusted R Squared = .229)

Table 7.45 shows the pairwise comparison of mean SCILO follow-up values, indicating a statistically significant difference between the mean values of 3<sup>rd</sup> year PPT and 4<sup>th</sup> year DVD groups (-1.134, p=0.008), and between 3<sup>rd</sup> year PPT and 4<sup>th</sup> year PPT intervention groups (-1.098, p=0.038). Thus, the mean SCILO follow-up values for the 3<sup>rd</sup> year PPT group were statistically significantly lower than for the 3<sup>rd</sup> year DVD, 4<sup>th</sup> year PPT and 4<sup>th</sup> year DVD groups, as demonstrated graphically in Figure 7. 22.

**Table 7.45** Pairwise comparison of mean SCILO follow-up scores between years 4 and 3 (after adjusting for post-intervention SCILO values)

Dependent variable: Follow-up		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
<b>DVD and PPT comparisons within and across Year3 and Year 4</b>	3 <sup>rd</sup> DVD vs. 3 <sup>rd</sup> PPT	0.585	0.275	-0.084	1.255	0.107
	3 <sup>rd</sup> DVD vs. 4 <sup>th</sup> DVD	-0.529	0.338	-1.441	0.383	0.726
	3 <sup>rd</sup> DVD vs. 4 <sup>th</sup> PPT	-0.494	0.386	-1.537	0.550	1.000
	3 <sup>rd</sup> PPT vs. 4 <sup>th</sup> DVD	-1.134*	0.342	-2.057	-0.210	0.008
	3 <sup>rd</sup> PPT vs. 4 <sup>th</sup> PPT	-1.098*	0.393	-2.159	-0.038	0.038
	4 <sup>th</sup> PPT vs. 4 <sup>th</sup> DVD	-0.111	0.282	-0.800	0.577	1.000



Covariates appearing in the model are evaluated at the following values: SCILOPost = 6.60

**Figure 7.22** Graphical representation of pairwise comparison of mean SCILO follow-up scores between years 4 and 3 (after adjusting for post-intervention SCILO values)

### *RIBS*

After adjusting for post-intervention RIBS values, the data in Table 7.46 show no statistically significant difference ( $F(3,84)=0.80$ ,  $p=0.500$ ) in the mean values of RIBS follow-up between years 4 and 3. Table 7.46 also shows that the post-intervention RIBS values were significantly related ( $F(1,84)=20.92$ ,  $p<0.001$ ) to the RIBS follow-up values.

**Table 7.46** Test of between-subjects effects at follow-up between years 4 and 3 after adjusting for post-intervention RIBS values

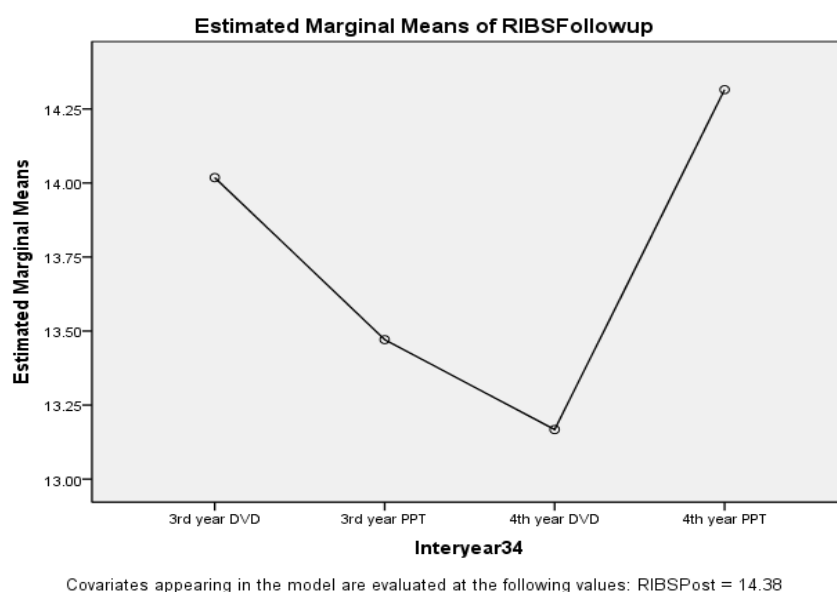
Dependent Variable: RIBS Follow-up (T2)						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	164.821 <sup>a</sup>	4	41.205	7.012	<0.001	0.250
Intercept	161.877	1	161.877	27.549	<0.001	0.247
Interyear34	14.022	3	4.674	0.795	0.500	0.028
RIBSPost	122.895	1	122.895	20.915	<0.001	0.199
Error	493.583	84	5.876			
Total	17382.000	89				
Corrected Total	658.404	88				

a. R Squared = .250 (Adjusted R Squared = .215)

Table 7.47 shows the pairwise comparison of mean RIBS follow-up values, indicating no statistically significant difference between the mean values of the four intervention groups, as demonstrated graphically in Figure 7.23.

**Table 7.47** Pairwise comparison of mean RIBS follow-up scores between years 4 and 3 (after adjusting for post-intervention RIBS values)

Dependent variable: Follow-up		Mean difference	Std. error	95% CI for difference		P-value
				Lower Bound	Upper Bound	
<b>DVD and PPT comparisons within and across Year3 and Year 4</b>	3 <sup>rd</sup> DVD vs. 3 <sup>rd</sup> PPT	0.389	0.600	-1.070	1.848	1.000
	3 <sup>rd</sup> DVD vs. 4 <sup>th</sup> DVD	0.851	0.718	-1.090	2.792	1.000
	3 <sup>rd</sup> DVD vs. 4 <sup>th</sup> PPT	-0.297	0.816	-2.502	1.908	1.000
	3 <sup>rd</sup> PPT vs. 4 <sup>th</sup> DVD	0.304	0.721	-1.645	2.252	1.000
	3 <sup>rd</sup> PPT vs. 4 <sup>th</sup> PPT	-0.844	0.837	-3.106	1.417	1.000
	4 <sup>th</sup> PPT vs. 4 <sup>th</sup> DVD	0.799	0.816	-1.194	2.792	0.990



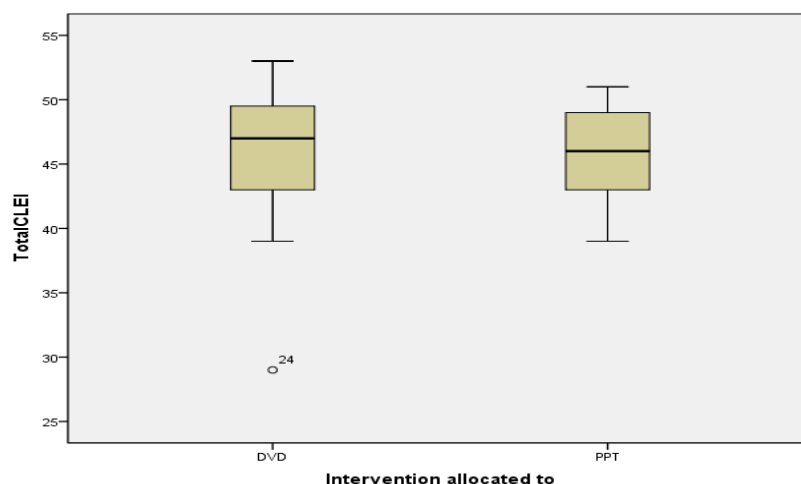
**Figure 7.23** Graphical representation of the pairwise comparison of mean RIBS follow-up scores between years 4 and 3 (after adjusting for post-intervention RIBS values)

### 7.10.3 Influence of clinical placement in year 4 DVD and PPT students

Fourth year subjects from both the DVD and PPT groups scored similarly on the adapted CLEI with mean scores of above 45 as displayed in Table 7.48, indicating an overall moderately positive experience of the clinical placement. Table 7.48 also compares the mean values of the adapted CLEI between the two educational intervention groups (DVD and PPT) for the fourth year subjects, indicating no statistically significant difference between these groups, although there was a non-significant difference of 0.093 ( $t = 0.053$ ,  $p = 0.958$ ). Figure 7.24 shows the CLEI results in a boxplot.

**Table 7.48** Comparison of mean values of total adapted CLEI between the film intervention (DVD) and its comparative lecture condition (PPT) among 4<sup>th</sup> year subjects

Intervention Group	Mean (s.d.) values of total CLEI	t	df	Mean difference	Std. error difference	95% CI for difference		P-value
						Lower Bound	Upper Bound	
DVD	45.63 (5.49)	0.053	30	0.093	1.765	-3.512	3.698	0.958
PPT	45.54 (3.86)							



**Figure 7.24** Boxplot representation of the comparison of mean values of total adapted CLEI between the intervention (DVD) and its comparative condition (PPT) of the 4<sup>th</sup> year subjects

## 7.10 Summary of open ended questions at T1

The T1 questionnaire given to the third and fourth year participants concluded with three open-ended questions. These questions explored what the students liked most about the DVD intervention or comparative PPT lecture condition, what they liked least and what they felt was missing. Tables 7.49 and 7.50 summarise the responses of the third and fourth year participants respectively and are followed by a discussion of the implications of this feedback for the future development of the present study.

**Table 7.49** Summary of main responses to open-ended questions on participants' views in post-intervention questionnaire: comparison of year three DVD and PPT groups

Responses	Frequency of comments	
	DVD (30)	PPT (31)
<b>What did participants like best about the intervention or comparative condition?</b>		
Learning that people with mental disorders can recover	6	4
Interesting and important topic 'mental disorders and stigma'	4	2
Increased my knowledge/ I learned something new	18	24
Hearing and seeing real patient experiences/stories	22	0
Hearing about the feelings of those with mental disorders	6	0
Mode of intervention presentation	5	2
Learning how to help/deal/treat/interact with people with mental disorders	5	2
Learning statistics and facts about people with mental disorders	8	5
Correcting common myths about people with mental disorders	10	8
<b>What did participants like least about the intervention or comparative condition?</b>		
Not enough examples of mental disorders	1	1
All factual material lacking patient experiences	0	3
Intervention could be shorter	9	6
Some terms were not clear	3	0
Nothing was liked least	17	17
<b>What did participants feel was missing from the intervention or comparative condition?</b>		
Include a wider range of mental disorders	3	7
Include healthcare professional experiences and hospital environments	1	4
Filmed material of patient with mental disorder experiences	0	2
Nothing was missing	21	15

**Table 7.50** Summary of main responses to open-ended questions on participants' views in post-intervention questionnaire: comparison of year four DVD and PPT groups

Responses	Frequency of comments	
	DVD (21)	PPT (21)
<b>What did participants like best about the intervention or comparative condition?</b>		
Learning that people with mental disorders can recover	3	3
Interesting and important topic 'mental disorders and stigma'	2	5
Increased my knowledge/ I learned something new	5	9
Hearing and seeing real patient experiences/stories	19	0
Hearing about the feelings of those with mental disorders	2	0
Mode of intervention presentation	2	1
Learning how to help/deal/treat/interact with people with mental disorders	5	6
Learning statistics and facts about people with mental disorders	2	4
Correcting common myths about people with mental disorders	4	4
<b>What did participants like least about the intervention or comparative condition?</b>		
No question and answer session	2	
Not enough examples of Arab patients	1	2
All factual material lacking patient experiences	0	2
Sound quality needs improvement	4	0
Too much information with some repetition	0	2
Intervention could be shorter	2	2
Some terms were not clear	1	1
Nothing was liked least	12	14
<b>What did participants feel was missing from the intervention or comparative condition?</b>		
Include a wider range of mental disorders	1	
Include healthcare professional experiences and hospital environments	1	2
Question and answer session following intervention	3	0
Actual experience with a live speaker with mental disorder	1	0
Filmed material of patient with mental disorder experiences	0	7
Nothing was missing	14	12

Across the third and fourth year students the feedback was overall very positive. When asked what they liked the least and what was missing, the most frequent responses by far for all groups was 'nothing'. However, there was practical feedback to inform a definitive RCT; for example, several participants felt that the length of the educational interventions was excessive and some members of the 4<sup>th</sup> year DVD group raised sound quality issues.

The main difference between the third and fourth year students was that the fourth years had recently had exposure to mental disorder patient in the clinical setting. This may



account for variations in the feedback between the groups; for example, the third years were more interested in factual information like statistics and correcting common myths and misconceptions about people with mental disorders. In contrast, the fourth year students were more interested in the opportunity to discuss concerns and questions raised by the educational interventions, which did not emerge as a factor for the third year students at all. That said, both years did comment that there was confusion about some terminology, which might be alleviated by a question-and-answer session held after the DVD has been viewed. There was also a desire to see a wider range of mental disorders discussed in both years and across the sessions.

Finally, the nursing student's feedback provided a consensus on certain key features that were seen as important to their learning and will be fed into a future definitive RCT. These included more examples of healthcare settings and healthcare professionals. Also highlighted was the presence of people with mental disorders, either in person or on film. This was felt to be particularly lacking from the PPT groups. The impact of personal experience and of encounters with patients with mental disorders is explored in greater depth in the following chapter, as nursing students reflect on their clinical placements. Its explicit mention by students in the questionnaire highlights it as a salient feature that appears to enhance the learning experience.

The last point that students felt required greater inclusion was that of examples of people with mental disorders in an Arab context. Although this was not highlighted across both years, given the unique cultural features raised in Chapter 2, it does serve as a useful reminder for future research into this work.

## **7.11 Summary of main study findings**

The exploratory RCT first aimed to describe the demographic and personal profile characteristics of Saudi nursing students at baseline. It was found that a majority of participants had had little or no personal contact with people suffering from mental illness, such as a close friend, work colleague, household member or neighbour. Furthermore, the academic topic of mental illness was new to approximately half of the participants, with those who had encountered it referring only to a cognitive component that was largely focused on cognitive theory and did not consider stigma. Outcome measure indicators of mental disorder-related stigma at baseline suggested that there was

a high overall incidence of negative stigmatising attitudes and intended behaviour across all study years, as well as a low level of knowledge about people with mental disorders.

Immediately post-intervention, both the DVD and its comparative PPT lecture had a highly significant and beneficial impact on stigma and knowledge indicators for both 3<sup>rd</sup> and 4<sup>th</sup>-year participants in comparison to the education-as-usual 2<sup>nd</sup>-year control group. No significant difference was observed between the four educational conditions on these outcome changes, suggesting that they had been equally effective in producing stigma change scores. Observed trends, however, suggested that for 3<sup>rd</sup>-year participants, the DVD had been more effective in stigma reduction and knowledge enhancement, whilst the PPT lecture was more effective for 4<sup>th</sup>-year participants.

At three-month follow up, comparisons between the control group and experimental conditions confirmed that observed reductions to stigmatising attitudes as assessed by the MICA were retained. Improved knowledge as assessed by SILCO was maintained for the 3<sup>rd</sup>-year DVD condition but not the 3<sup>rd</sup>-year PPT condition, and for both 4<sup>th</sup>-year educational conditions in comparison to controls. In relation to these effects, there was a highly significant difference between the 3<sup>rd</sup>-year and control groups, as well as for the 4<sup>th</sup>-year group in comparison to control. This was not observed, however, for the intended behaviours as assessed by RIBS. Furthermore, there was a highly significant difference in the outcomes of the four educational groups for measures of knowledge and attitudes, but not for intended behaviours. At follow-up, there were significant differences between the 3<sup>rd</sup>-year and 4<sup>th</sup>-year PPT lecture groups, with the latter reporting significantly less stigmatising attitudes and significantly greater knowledge of mental illness. The 4<sup>th</sup>-year DVD participants also demonstrated significantly greater knowledge of mental illness than 3<sup>rd</sup>-year PPT participants, but no significant differences were observed between other educational conditions.

Due to the study design, scores were considered for adjustment post-intervention in order to remedy the inbuilt confounding effect of year of study and baseline scores. This analysis revealed that while adjusted baseline scores had affected the results, the measures were not affected by the year of study. For the attitude measure, adjustment indicated that for 3<sup>rd</sup>-year students, the DVD had been more beneficial than the PPT. There was also a difference in stigma reduction between 3<sup>rd</sup> and 4<sup>th</sup>-year PPT conditions, but not between the two 4<sup>th</sup>-year conditions. After adjusting for baseline RIBS scores

and SILCO scores, there were no significant differences between the educational conditions in terms of their impact on reducing stigma post-intervention.

Post-intervention measure scores were also adjusted for in the analysis of the three-month follow-up, in order to control for inbuilt confounds and their impact on changes in the indicators of stigma. With regard to stigmatising attitudes, this indicated that there were no significant differences and that attitudes were not improved at follow-up. As to intended behaviour, there was no difference between the educational conditions and no improvement in this at follow-up. On measures of knowledge at follow up, there were significant between-group differences between the 3<sup>rd</sup> and 4<sup>th</sup>-year DVD conditions, between the 3<sup>rd</sup>-year PPT and 4<sup>th</sup>-year DVD conditions, and between the 3<sup>rd</sup> and 4<sup>th</sup>-year PPT conditions. Finally, the CLEI results indicated no significant difference between the 4<sup>th</sup> year intervention groups in terms of their positivity of the experience of their clinical placements.

## **7.12 Conclusion**

This chapter has presented a detailed analysis of the RCT, summarising the main findings of this trial in regards to the attitudes, intended behaviour and knowledge of the nursing students towards people with mental disorders. The summary demonstrated that the intervention had a significant impact on the stigmatising attitudes, intended behaviour and knowledge of the nursing students in comparison to the education-as-usual condition. The thesis now moves on to the final stage of the feasibility/piloting phase, the process evaluation in Chapter 8.

## **CHAPTER 8**

### **Process evaluation of the exploratory RCT: a thematic analysis**

#### **8.1 Introduction**

This chapter explores how the intervention influenced their clinical placement, and the students' experiences of being in the clinical setting and encountering people with mental disorders. In this chapter the thematic analysis of the qualitative interviews undertaken with the student nurses following their clinical placement is presented. The aims and objectives of the process evaluation are listed in Section 8.2. Section 8.3 discusses the methods used to carry out the process evaluation: semi-structured qualitative interviews and measurement of changes in students' stigma scores. The results of the interviews are presented in Section 8.4, then the chapter closes with a summary of the results, to be discussed in chapter 9.

#### **8.2 Aims and objectives**

As per the MRC complex interventions framework guidelines, a process evaluation using a mixture of qualitative and quantitative methods was conducted with the aim of evaluating the acceptability, active ingredients and influence of the intervention by exploring how and why the intervention worked (Craig et al., 2008; Oakley et al., 2006). The process evaluation explored the implementation of the intervention in relation to the outcome results and the views of participants on the intervention (Oakley et al., 2006). It was also conducted with the aim of informing the future design of an optimised version of the intervention for the purpose of a definitive RCT.

The objectives of the process evaluation study supplemented those mentioned in the exploratory RCT (listed in Chapter 7) and are related to assessing the feasibility, acceptability and preliminary effectiveness of the intervention. The objectives were to:

1. Describe the views of the nursing student participants about what salient events within the clinical placement influenced their perspectives on people with mental disorders.
2. Test the acceptability of the intervention by exploring the participants' views of the intervention in relation to their clinical placements.

## 8.3 Methods

### 8.3.1 Research design and recruitment

To achieve the above objectives, a mixed-methods research design was used, involving the collection of data from semi-structured, face-to-face interviews. Following through from the exploratory RCT, the process evaluation focused on a purposive sample of interviewees recruited from the cohort of 4<sup>th</sup> year Saudi Nursing students who had been randomly assigned and attended either the filmed (DVD) intervention or its comparative lecture (PPT) condition, after completing their clinical placement and outcome measures, as discussed in Chapter 7, Sections 7.3 - 7.6. The justification for the purposive sampling of interviewees as opposed to sampling based on outcome score trends was due to the limited number of participants indicating a willingness to be interviewed on their follow-up (T2) post-clinical placement questionnaire. Hence, the purposive sample (n=16) comprised those who were willing to be interviewed.

**Table 8.1** Characteristics of interviewed participants

Participant code	Age	Nationality	Previous course/lecture on mental illness
P 70	21	Saudi	Yes
P 73	22	Saudi	No
P 76	21	Saudi	Yes
P 80	21	Saudi	Yes
P 83	21	Saudi	No
P 86	21	Saudi	No
P 87	21	Saudi	Yes
P 90	21	Saudi	Yes
P 99	21	Saudi	Yes
P 97	21	Saudi	Yes
P 98	20	Saudi	No
P 99	21	Saudi	Yes
P 101	21	Saudi	Yes
P 102	22	Saudi	Yes
P 104	21	Saudi	No
P 111	21	Saudi	Yes

\* Participants were coded as per the exploratory trial. They retained their original codes for consistency throughout the study. \*\* All the participants were female.

### 8.3.2 Data collection: the interview process

The researcher arranged with each of the 16 participants an appropriate date and time to conduct the interviews. The researcher made use of an interview schedule (Appendix 13) with guiding questions, two audio recording devices and a note placed on the classroom door that read 'Please do not disturb, interview in progress'. The researcher introduced

herself, welcomed and thanked the interviewee for agreeing to participate, requested mobile phones be turned off. The researcher offered reassurance that confidentiality applied with the right to withdraw at any time. The interviewees were reminded that the interview would take approximately 20-30 minutes. The interviews began with open-ended questions regarding the intervention they were allocated to and their clinical placement experience. The researcher concluded the interviews by summarising the main points from the interview, concluding with thanks and asking permission for future contact.

The purposive sample of 16 fourth year nursing student participants were interviewed for their experiences during their psychiatric clinical placement. Participants were asked to describe their experiences of the educational intervention they were allocated to and the influence of the intervention had with regards to the way they view people with mental disorders. They were also asked to describe their clinical placement experiences making reference to salient events during their clinical placement that influenced their views toward people with mental disorders.

### **8.3.3 Data transcription**

Once the 16 participants had been interviewed, the researcher downloaded the audio files on to a password-protected computer. The researcher then transcribed each of the interviews verbatim and any Arabic phrases were subsequently translated into English. The researcher next reviewed each of the typed transcripts with the interviewees to confirm that the material was accurately transcribed prior to deleting the audio files and beginning the analysis.

### **8.3.4 Data analysis**

Responses were subjected to thematic analysis; the researcher modified and applied the steps outlined by Braun and Clarke (2006), searching for themes within the interview responses in an attempt to provide a rich and detailed account of the interviewees' experiences of their psychiatric clinical placement. The analysis took an inductive (rather than deductive) approach, the aim being to produce an overall understanding of the dataset using semantic (rather than latent) themes, as thematic analysis is defined as "a method for identifying, analysing, and reporting patterns (themes) within data" (Braun and

Clarke, 2006, p. 79). The researcher drew from the phases of data analysis outlined by Braun and Clarke (2006) to analyse the interview transcripts. The analysis process for the data within the present study used the following four phases:

- Phase 1: Getting familiar with the data
- Phase 2: Searching, defining and naming the themes
- Phase 3: Reviewing the themes
- Phase 4: Producing the report

### ***Phase 1: Getting familiar with the data***

In order to become familiar with the data, the researcher read through all transcripts three times. The first two readings involved no note-taking or coding, but allowed the researcher to understand the depth and breadth of the content. During the third systematic reading, the researcher made notes of what was significant about each response and coded for the topic being discussed. The researcher made no assumptions about the topics, coding for as many potential themes and patterns as possible (Braun and Clarke, 2006). It was common that responses included more than one topic of discussion. Hence, responses with several topics were coded under multiple topic headings. If a response covered the topics of patients' behaviour, staff attitudes and therapeutic activity, for example, then it was coded under each of these topic headings.

Coding the topics allowed the researcher to subdivide the data and eventually categorise them into themes. The coding was done manually, without specialised software. This process was done systematically, reading each response, identifying its topics and establishing how the topics related to each other. At the end of this phase, each response was linked to at least one topic. A sample of the coded interviewee responses is attached in Appendix 14.

### ***Phase 2: Searching, defining and naming the themes***

In this phase, the researcher generated a list of all the topics that had emerged from the responses in Phase 1, then organised the responses meaningfully by grouping them under each topic (Braun and Clarke, 2006). For example, all comments regarding the hospital building were collated under that heading. This process helped to create meaning in the interview data (Thomas, 2006). Next, the researcher manually sorted the topics into potential themes, identified by reading the topic headings and deciding which were

related to each other. The researcher analysed the topics and considered how different ones could be grouped to constitute a theme, i.e. a compilation of all topics falling under a specific heading (Braun and Clarke, 2006; Thomas, 2006). For example, the topics of 'hospital building' and 'hygiene/sanitation' were grouped under the theme of 'hospital environment'. A 'miscellaneous' theme was also created to include all topics that did not seem to fit under any particular theme.

### ***Phase 3: Reviewing the themes***

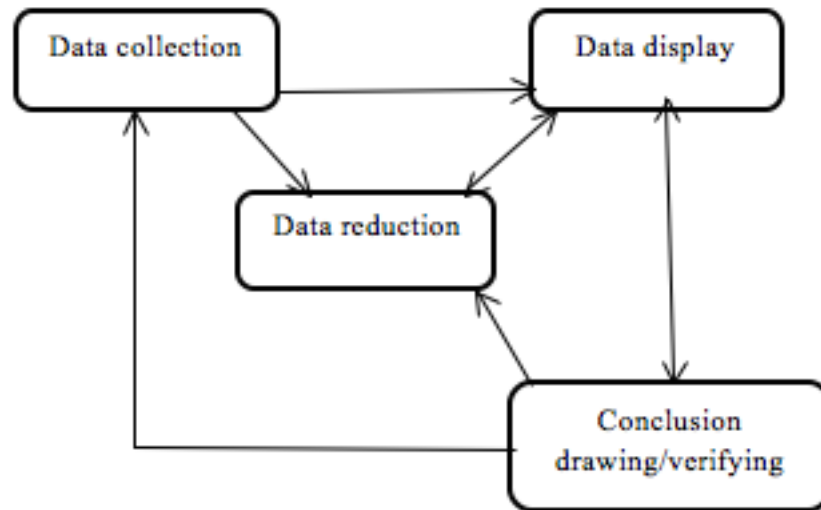
After dividing the topics into themes, the researcher repeatedly reread all the responses and considered the validity of their assignment to each theme (Braun and Clarke, 2006). During this review process, the researcher carefully determined whether any topics had been missed or misclassified in the earlier coding. In other words, the researcher ensured that all responses were grouped under the appropriate themes. Topics under the 'miscellaneous' theme were carefully examined to see if they would fit another theme.

Themes that seemed irrelevant were discarded. The researcher also merged themes that fitted together. Together, these provided a general picture of the range of behaviours of psychiatric patients, which should not be regarded as either negative or positive. Large themes with many topics or separate elements were subdivided to make them more specific. The set of themes that emerged from this phase characterized the interview data and was used in the following step to produce the report.

### ***Phase 4: Producing the report***

The purpose of writing up a thematic analysis, according to Braun and Clarke (2006), is "to tell the complicated story of your data in a way which convinces the reader of the merit and validity of your analysis". The work of Miles and Huberman (1994) was drawn on to enhance this process. Miles and Huberman conceptualised three concurrent flows of activity for qualitative data analysis: data condensation, data display, and conclusion drawing/verification, as depicted in Figure 8.1 (adopted from Miles and Huberman, (1994)). The data reduction process refers to the process of choosing, focusing, simplifying, building and transforming data (Miles and Huberman, 1994).





**Figure 8.1** Components of data analysis: interactive model (adapted from Miles and Huberman, 1994, p12)

In the current study, the analysis results were presented in the order of the themes. Narrative extracts from the interviews were tabulated and grouped according to their similarities. Important quotations were extracted to help derive the themes. By employing data reduction and data display concurrently, the researcher was able to focus on simplifying the transcripts in ways that were relevant to the study concept. The final phases of data analysis were linked by arranging and organising the concepts and findings emerging from the reduction and display processes. Themes and relevant structures were drawn from the data and displayed, while contradictory and identical data were clarified in order to produce the final themes. The excerpts included in the results were direct quotes of interview responses, which were used to provide support for the researcher's identification of the themes and to show whether interviewees had similar or differing opinions. Participant anonymity was protected by removing any identifying information, such as names, from the quotes included below.

## 8.4 Thematic analysis findings

This section presents the main findings emerging from the interviews regarding nursing students' experiences of psychiatric clinical placement. The participants were asked to describe their experiences of the educational intervention to which they were allocated and to discuss its influence on their views regarding people with a mental disorder. It also introduces the eight themes that emerged from the interpretive analysis of the interview

data. Theme one explored the influence of the intervention delivered as part of the present study and was titled 'raised awareness – challenging perceptions and beliefs'. The second and third themes were concerned with the student nurses' attitudes towards the clinical placement; these were titled 'expectations versus reality' and 'learning through taught content and social contact'. Themes four to seven address what the student nurses experienced and observed during their clinical placement. These four themes were titled 'hospital environment'; 'staff attitudes and behaviour'; 'patient behaviour' and 'therapeutic activity'. The eighth and final theme 'changing perspectives' explored how their attitudes had changed as a result of the intervention and the clinical placement.

#### **8.4.1 Theme 1: Raised awareness - challenging perceptions and beliefs**

The educational intervention given to the participants and its comparative condition were in the form of filmed personal testimonies and a PowerPoint lecture respectively. When asked whether they recalled being given any educational material regarding mental disorders and stigma, most but not all of the participants remembered which group they had attended. Eight of the eleven interview participants in the film group remembered the intervention and three did not, while all four participants belonging to the comparative lecture group remembered it. Overall, most participants were able to recall specific points mentioned in the film or lecture regarding the stigma faced by people with mental disorders.

Participants who could remember the purpose of the educational intervention or its comparative condition reported being able to apply their new knowledge to practice. They stated that it helped them to be more aware of the types and prevalence of mental disorder-related stigma as they encountered it during their clinical placement. This was clearly explained by a participant in the film group:

After seeing the video, I realised just how much stigma these patients are facing and so as a nurse I have to always have this in my mind when I deal with them. When I went into clinical placement and dealt with the patients and heard their stories, I saw the same types of stigma that were talked about on the video. This made me feel the need to be aware of the stigma they face so that I am careful when dealing with them, so that I don't make them feel like... there's something wrong with them, because they already feel stigmatised (P 86).

The educational intervention made the participants more specifically aware of stigma by association. For example, it made them aware that patient' families do not want people to know that they have family members with psychiatric disorders at home, so they prefer to leave their relatives in the social isolation of a hospital. Families would not even visit patients in hospital for fear of being associated with them and thereby being stigmatised as a family with a mentally ill member.

Participants also reported that the educational intervention and its comparative condition taught them how to deal with patients in their clinical placement. In particular, it taught them to interact with them, as they would normally do with non-psychiatric patients. The following are two such examples:

So I have to say watching the video of course helped me in the placement and taught me how to treat [psychiatric patients] as equals (P 86).

[Before] I attended the lecture, if by chance I saw someone... who was mentally ill, ...I would be afraid and not know what to do and I couldn't go near him... But now, it's... become normal for me. Even if I see that he is in an agitated condition and aggressive and... that everyone is looking, it's the opposite, it's normal. Maybe it was the lecture and how it said people with mental illness are more likely to hurt themselves than others or maybe because we went and mixed with them during clinical placement and sat in the same place, so I feel it's really normal (P 90).

Following the educational intervention and the clinical placement, participants were willing to challenge earlier preconceptions, now believing that it was possible for patients with mental disorders to recover and lead normal lives. They also felt empowered with the newly obtained knowledge and skills to treat patients with mental disorders, for example,

We used to think... it was difficult for [someone who was mentally ill] to marry and... work and such. But after we saw the video and after we finished the course, I feel like a lot of these beliefs changed. They can recover and lead a normal life. It changed my mind and it was nice to see things as they really are. I felt as though the video gave me a positive view of how to deal with these patients. That [they have] a life outside the mental ward and that they can improve and recover and live their lives afterwards (P 101).

#### **8.4.2 Theme 2: Expectations versus reality**

All but one of the 16 interviewees reported no prior experience of psychiatric patients. Most of these inexperienced participants felt nervous about the forthcoming clinical placement, not knowing how they were supposed to interact or deal with the patients. For example, they were afraid that patients might be easily agitated and behave noisily or violently, perhaps striking them. However, this view changed after participants had actually interacted with patients. After the intervention and working closely with psychiatric patients, participants' fear faded away, as they did not see the aggressive behaviour they had expected; indeed, some stated that they now saw them as being just like 'normal' patients, as these extracts illustrate:

Umm, I had a scary picture in mind. This was my first time in a psychiatric hospital... I was afraid the psychiatric patients wouldn't accept us. Maybe they would... hit me or throw something at me... [But] I saw the exact opposite... and now I look forward to going back (P 73).

I was very afraid of the patients and of the hospital itself. I thought it would be just like... the movies... The first day made a difference for me... the picture was really different. [The patients] are basically like any normal patient and you don't feel like there's anything wrong with them (P 98).

However, it was evident from the use of terms such as 'normal' that a degree of stigmatisation remained, despite the more accepting tone that the nursing students use to describe the patients. This can be seen through the following quotes where some participants emphasised that while patients seemed 'normal':

...you still had to pay attention and keep your distance from them (P 87).

This was particularly found in discussions regarding the acute patients. Only one nursing student maintained a different perspective, feeling excitement rather fear about going to the psychiatric hospital for her placement. She described it as:

...something new that I was embarking on for the first time... [she] was just nervous because it was all new...(P 101).

This quote was particularly interesting as P 101 had initially presented with a highly stigmatising attitude (MICA score 61), improving post-intervention (MICA score 55), and then further improved following the clinical placement (MICA score 47). A second quote from P 101's interview gives some insight into how the experience served to impact on her attitude towards people with mental health related disorders:

I began to feel that these people weren't scary. It was very normal to sit and talk to them and a lot of things changed on that first day (P 101).

Overall, despite the evidence of ingrained stigmatising terminology to describe the patients with mental health-related disorders, the participants had expected psychiatric patients to seem different from 'ordinary' people, but this perception changed after interacting with them. However, there was a differentiation between the perceptions of patients in the acute ward compared to those in the chronic wards. The following quote demonstrates how the clinical placement served to educate the nursing students on the variations in conditions and presentation of symptoms:

They [other student nurses] were shocked by the patients in the acute ward.... We imagined that all the patients were experiencing symptoms at the same level of intensity as those in the acute ward that we saw. We did not realise there were calmer quieter ones (P 104).

Interestingly, the participant with previous experience of psychiatric patients through family social events and did not expect anything new of the clinical placement (Table 8.1):

I have seen psychiatric patients. It was not new to me (P 102).

The interview with P 102 supported the inclusion of people with mental disorders in educational interventions as the exposure and contact, even through filmed footage, can alleviate fears and stigmatisation. P 102 felt that her previous experiences with a family member with a mental disorder had given her a greater acceptance and compassion towards such conditions, as evidence by the follow quote:

...maybe...my acceptance was greater than others who for example never saw this (P 102).

### **8.4.3 Theme 3: Learning through taught content and social contact**

The descriptions of the psychiatry course by the participants suggest that the content of the educational intervention (DVD), comparative condition (PPT) and clinical placement were stimulating and challenging. Participants in general thought that the clinical placement was beneficial, as they had the opportunity to practice what they had learned in theory by dealing with psychiatric patients directly. One nursing student referred to it as:

...the best course and best unit (P 86).

While another stated:

Putting the theory to work was a great thing (P 83).

Part of the reason for the positive response to the clinical placement appeared to be grounded in the immediacy of improvement that could be observed from interactions with chronically ill patients. The student nurses were surprised and excited to witness apparent progress in the mental wellbeing of patients simply through their interactions:

I didn't think that we would be able to bring about any noticeable difference in the patients...[but] there were some patients that we dealt with and when we went the first week, by the second week we found a completely changed person, very much so. In looks, in interest, in speech, everything...when we dealt with them [the patients] and would see an observable change in a short time. That most of all is what really surprised me and changed my view [of people with mental disorders] (P 90).

The interest and motivation are encouraging in relation to the previously recorded stigmatising attitudes, knowledge and behaviour. However, there was a marked degree of paternalism towards the patients that highlighted further educational gaps in the participants understanding of people with mental disorders.

I expected them to be crazy and that we would not be able to deal with them and that they wouldn't be able to deal with us or understand us, but I was surprised to see that they could talk with us (God be praised) and we understood them clearly...in terms of negatively meeting my expectations, there was this one patient that kept screaming...I thought all the patients were going to be just like him. But the good ones...there was an engineer, he understood things and was sensible and sane...he

was also very intelligent but he has a psychiatric disorder that is bipolar...I didn't expect there to be sane people like him that were engineers, doctors or even teachers... (P 86).

There was just one patient, she was aggressive...I wanted to get her to come sit with us in group therapy or just come and sit with everyone...we tried with her from the first day. Every day that we came, there was a change...By the end of the course...she had started taking care of herself and her clothes. And honestly for us it was something that was very cheering. That we changed something even if it was something small...(P 101).

The latter quote also reveals a lack of understanding that the observed improvements among certain patients, although positive, could also be the result of the stimuli offered by the interactions from the nursing students. In which case they may be transient and unsustained, similar to the effects of the educational intervention on the nursing students. This emphasises the need for on-going input, both into the care of people with mental disorders, and the education of those who care for them.

While this gap provides insight into the required refinement of the educational intervention and need for prolonged training, there was an acknowledgement among the nursing students that they could have been better prepared for the clinical placement. Specifically the interviews revealed concerns that what they had learned in theory did not prepare them well enough for the practice, and that a longer practice period would have been preferable:

Actually, [the psychiatry course] was good and bad for me because it's a new experience... It was good because I was able to practice things we had learned in theory. Umm, the bad, I think was that our knowledge... was not enough to go and practice and deal with the patients. I expect that if we had stayed longer, it would have been better (P 70).

Despite the limited time spent in clinical placement, the student nurses were still able to demonstrate that they had experienced a change in attitude and behaviour towards people with mental disorders as a direct result of these interactions. Across the interviews the participants discussed their early fears of encountering 'crazy' or 'violent' patients who

would want to harm them, and their surprise at what they actually encountered. One student stated:

Society here really has no idea about mental health...they think that [it's] crazy people and people who want to fight, people who could kill you...(P 95).

Following the clinical placement, the participants reflected on their new understanding and perceptions towards psychiatric patients. They demonstrated that had learned how to communicate with the patients with a newfound understanding that people with mental disorder have the potential to recover and to return to their lives, as this extract illustrates:

When I took the [psychiatry] course, I learned a lot of things and a lot of concepts were corrected. First...was the nature...and the symptoms of schizophrenia, delusions and hallucinations...so now...I've started teaching the people around me that no, [psychiatric patients] aren't crazy, they're just mentally ill. They can go back to their lives and live normally, especially those who are bipolar and such (P 95).

This final quote within Theme 2 displays elements of positive improvements in the participant's overall perceptions of the clinical placement and patient interactions. However, it also further emphasises the simplistic understand of the nursing students towards the nature of mental disorders and the need for continuous education.

#### **8.4.4 Theme 4: Hospital environment**

During the interviews the nursing students were asked about the clinical environment of the hospital. The response revealed a marked degree of compassion for the patients, as the nursing students discussed poor quality facilities. Throughout the participant responses there was recognition of lack of value for people with mental disorders that was displayed through the environments the patients were placed in. As one participant observed:

I felt that they were people that needed to be given a chance. They deserved more value. We needed to value them more (P 86).

Many of participants voiced concerns about the hospital environment, which they did not believe met the required standards. The student nurses expressed concern at



overcrowding on wards, which could house up to forty patients. To the nursing students this demonstrated the lack of value in the care of mental disorder patients and the priorities of the hospital. Participants remarked that the architectural layout of the wards was constricting, reporting that inpatients would express a desire to leave the ward. One student nurse likened the environment to a cage:

I really didn't like the building... because I felt caged. I'm pretty sure [the patients] felt the same, because they were just locked between four walls and had no activities whatsoever (P 97).

It was not just the overcrowding that concerned the participants. The nursing students also reported some tension arising because of infection control and cleanliness issues that were compounded by the architectural design of the hospital. In particular the absence of isolation wards for HIV positive patients was concerning for the students who were shocked that they shared the same space as the other mental disorder patients:

There was also the problem that [the staff] had the patients mixed in the ward together. There was an HIV patient with the... other patients. We [student nurses] would walk around [the hospital] and feel afraid of infection...(P 104).

Poor infection control concerns in general emerged as a main theme across many of the interviews. The participants observed poor cleanliness practices as being directly tied to disorganisation of the wards as a treatment environment. There were reports that some wards would be cleaned and organised only when the staff expected a visit from physicians or hospital directors. This aspect was unexpected for the participants as explained in the following quote:

I imagined [the hospital] to be more organised. We [student nurses] objected to some things and tried to talk to the nurses about it, including the décor... The cleanliness was really bad... We used to go in feeling grossed (P 104).

In addition to the overcrowding and lack of cleanliness the nursing students also referred to the way the environment was used as a care facility, displeasing unease that it was not conducive to treatment and recovery. Most participants felt that the environment lacked stimulation; there was a daily cycle of boredom and repetition for the patients. The

following two quotes encapsulate the anxieties expressed by the nursing students about the lack of value and care for the patients exacerbated through the clinical environment:

I feel like as a place, it wasn't at all like a hospital. Whoever was admitted there, you would not expect to get better...first of all the cleanliness, second of all the bad treatment, third it was just really inhumane, not something that should be tolerated (P 101).

The environment is really bad...all of it: cleanliness, cleaning, ventilation, poor ventilation. There is no entertainment to keep them occupied (P 99).

#### **8.4.5 Theme 5: Staff attitudes and behaviour**

During the interviews the student nurses were asked to explore their experiences of their placement in order to determine what, if any, stigmatising attitudes, knowledge and behaviour were present while they were in the clinical environment. During the subsequent reflections the participants made frequent reference to the attitudes and actions of the nursing staff. Interestingly, the participants held mixed views on the manner in which care was provided, with examples ranging from negative to positive.

Where reports were negative the participants had observed nursing staff abusing patients verbally and at times physically, often applying unnecessary restraint. The extent of treatment that was classified as inappropriate ranged from lying to patients, shouting and threatening them, to more extreme measures such as physical restraint. This led one nursing student to comment that staff did not treat the patients as 'real people' (P 70). An example of inappropriate communication by the nursing staff to patients is provided below:

I saw that [the staff nurses] would just yell at [patients] and...use threats. And maybe they would say 'if you don't obey I will lock you up or send you away'...they...wouldn't deal with them correctly (P 87).

Other examples were recounted by different participants, whereby more extreme and violent physical restraint were employed by the nursing staff. These instances left the nursing students shaken and concerned about the standards of care for the patients:

Some of the nursing staff would isolate patients and tie them up, very restrictively. And sometimes some staff would hit the patients and such. Also, they didn't give them psychological support (P 99).

There was one guy who was a little violent and he wanted to fight...there should have been people who came and restrained him, but what happened is that they [the staff] came and grabbed and hit him. So that affected us all. To try and restrain him, yes, but it shouldn't have got to the level of hitting (P 101).

When the participants questioned the staff about what they viewed as inappropriate behaviour towards the patients, including the lack of activities and restrictive facilities, the nursing staff responded by stating that this was the nature of the work. The staff attitude was that the patients were agitated and unable to respond to anything other than measures such as restraint, rather than distraction and recreational therapies. These concerns revealed an insight into the compassion of the nursing students, and also their willingness to question clinical practice. However, witnessing this type of treatment may have also exacerbated stigma by association among the students, creating a reluctance to pursue a career in mental health nursing so as to avoid engaging in the practices they were observing:

I felt that a patient with psychiatric issues needs a combination of therapies not just medication. This is what mostly made me not like, or to prefer not to study psychiatry and such (P 83).

The nursing students were willing to explore the reason for the treatment they observed. Proposed reasons for the excessive restraint and a reliance on medication to keep patients under control were attributed to too few nurses and inadequate professional training:

Maybe there weren't enough nurses there who specialised in psychiatry and how to deal with psychiatric patients and the nurses just dispensed the medications and that is it. They didn't do any activities for the patients or take an interest in them (P 87).

Not all participants took this negative view however. Some were challenged by how to respond to the reports from patients about how nurses treated them based on the occasional unreliability of patient testimonials due to certain mental disorders. One participant expressly stated that a degree of caution was required regarding such reports:

With psychiatric patients, maybe the stuff that is being said is not real [true] (P 104).

In addition to this caution, and in opposition to the negative reports, some participants were highly complimentary about the care they witnessed from the nursing staff. For example, one said that staff and patients ‘interacted well’ (P 80). For some of the nursing students, the hospital environment, although not ideal was still an improvement on the care and environment they would receive in the community:

...none of the patients had problems from the staff themselves or the nurses or anything...[patients were] more comfortable in the hospital, as they felt it was safer for them than home (P 98).

In considering the participants feelings about the attitudes and behaviour of the nursing staff a limitation of these data must be acknowledged: the type of ward the participants had their placements on was not recorded (acute or chronic). It is possible that the marked difference in responses from the students in terms of positive and negative experiences were influenced by wards they were on and the severity of the patient conditions. This rationale is reflected in previous themes where the nursing student’s fears about personal safety from patients on acute and chronic wards are discussed across the interviews. In addition, the student nurses compared the practice of their module leaders from the university to that of the nursing staff. The module leaders were formally trained psychiatric clinicians who displayed calm behaviour towards the patients, impressing the participants. In contrast the nursing staff were often less formally trained, learning ‘on the job’ with less of a theoretical understanding of mental disorders. In summarising this theme it was evident from the interview data that the nursing students, although cautious in their own attitudes towards people with mental disorders, were confident in questioning stigmatising behaviours that were observed from the nursing staff, even if only in their private reflections.

#### **8.4.6 Theme 6: Patient behaviour**

During the interviews an emerging theme was the patient behaviour witnessed by the nursing students while on their clinical placements. The participant’s descriptions of the patient’s behaviour, both in reference to calm and moderate ‘normal’ behaviour, or loud, aggressive outbursts revealed insight into the attitudes, knowledge and expectations of the nursing students towards people with mental disorders. Unsurprisingly the patient

behaviour was found to be calmer in the chronic care wards and more aggressive and uncontrolled in the acute care settings. However, as the following accounts go on to show, the nursing students were impacted equally by their encounters, emphasising how personal contact can positively influence stigmatising attitudes, knowledge and behaviour.

The previous themes explored aspects of the nursing students use of language as they recounted their experiences in the clinical setting. As the present theme 'patient behaviour' emerged during the data analysis process it became evident that a source of great surprise to the participants was witnessing patients in the chronic ward, who were described as 'stable', 'quiet', 'calm' and 'co-operative'. The use of the word 'normal' to describe these people by the students was linked to behaviours that they seemed to personally feel were important, such as being articulate, well groomed, hygienic and unlikely to behave aggressively. The additional surprise at encountering patients who were highly educated and well aware of their disorder was not unexpected, given the portrayal of people with mental disorders in the media discussed in Chapter 2. The depth of stigmatising attitudes towards mental disorders was revealed further by the fact that the students felt it was noteworthy to witness patients who had developed relationships with other patients, being cooperative, helpful and caring to those around them. An example is shown in the following description of a patient with schizophrenia by one of the participants:

...[he was] very active...better than the others...(P 83)

The student went on to describe how the patient helped another patient who was blind:

...He always... fed him... sat with him [and] took care of everything for him (P 83).

The contrast to the quiet and peaceful atmosphere of the chronic ward was countered by the participant's perceptions of the acute wards, already alluded to. The acute patients were more agitated, aggressive and challenging, as these descriptions from nursing students illustrate:

She had... delusions, hallucinations, everything. We went in the first day and she was screaming, she didn't want medication and I didn't know what to do (P 80).

She was really aggressive. And there were things that she did that were strange. Maybe because of... her delusions of grandeur she treated everyone there as her slaves, even the ward nurses... There were a lot of problems and it was difficult to deal with her (P 104).

The participant experiences on the acute wards, although shocking for them, were often more closely aligned to the expectations of people with mental disorders of the student nurses:

...There was this one patient that kept screaming and he would sit on the floor not on the chairs, he would say strange stuff and scream. He was the expectation that I thought all the patients were going to be just like him...(P 86).

Despite the varying and at times extreme behaviours exhibited, contact with the psychiatric patients had an impact on the participant's attitudes and behaviour. The student nurses reported being emotionally touched by their encounters saying they felt "sympathetic" and "sorry" for the patients, with one stating::

...I really shouldn't be working in this field at all because I would really get attached. I couldn't ever, stop myself from thinking about them and their conditions (P 70).

Where participants witnessed inappropriate and rough treatment of patients by the nursing staff, often during vulnerable times such as acute stages of a disease, these feelings of sympathy for the patients motivated the participants to try to make a difference and act as patient advocates. For one participant this extended into a desire to make a wider contribution to changing public attitudes:

I wished I could do something for him...if only a little. I said, God willing, when I graduate, I will try and change people's perceptions. Since... I'm studying, maybe I can change it. But for me to change what everyone thinks... would be difficult... but as much as I can... I will try (P 111).

This participant was from the DVD group and during her interview she made reference to the impact the education intervention had had, that was compounded by what she witnessed in practice. This again serves to highlight how the

participants were influenced by the present study, taking a different view to the patient's behaviour than they might have done otherwise:

...at the beginning I would have dealt with the patient based on their condition...and think they would be like this for the rest of their lives...before watching the video, I thought a patient with a mental illness would maybe suddenly flip and I wouldn't know if he was talking to me because of his mental illness or normally...that changed (P 111).

#### **8.4.7 Theme 7: Therapeutic activity**

An unexpected theme that emerged was that of 'therapeutic activity'. During the interviews the student nurses reflected on the different types of care that they witnessed. Although theme 4 considered the hospital environment as largely lacking in stimuli for the patients, there were times when the students witnessed or participated in what was viewed as positive and recreational forms of therapeutic activities with the patients.

We got colours and books, we painted with [the patients], we got some knitting stuff, we had group breakfast and once we had like a makeover contest. We got some makeup and nail polish, they wore make-up and we acted like hairdressers and they acted like clients. Just to pamper them (P 97).

Predominantly however, the hospital staff engaged in firmer and more extreme therapeutic techniques, such as isolation or restraint. These were generally used to calm agitated patients, particularly if they were being violent toward the staff. As one student recalled when a patient hit a nurse:

...They [staff nurses] restrained him to the bed. It was a very scary situation... He was rude and used bad language...(P 102).

It is important to note that participants also reported some more positive experiences with agitated patients. There seemed to be a noticeable difference in the way that such incidents were dealt with by the doctors acting as module leaders on the students' course and who attended the clinical placement with them, in comparison to the hospital staff. These module leaders appeared more professional, tolerant and understanding of the patients for example,

She [the course module doctor] didn't scold or anything, she just tried to cover her face and left the room. And she said, 'That's it, leave her [the patient] alone. She's agitated and such, that's it. Let her get comfortable'. And [the doctor] left and... [the patient] was then okay. She knew how to keep control (P 83).

It was therefore interesting that the students had shown discernment and a critical attitude towards their experiences, concluding that psychiatric patients, one of the most important forms of therapeutic therapy was having someone to listen to and talk with:

Most of the patients complained that no one talked to them. They needed someone to talk to. They were happy when we came and talked to them (P 80).

In sum, participants believed that patients needed therapy options other than medication to be readily available to them if they were to recover fully. They believed that using both medication and other therapies, such as occupational therapy in the form of arts and crafts, could potentially greatly improve patients' condition. This again, opposes many of the early beliefs the student's held about recovery in mental health patients:

They [the patients] could have been healthier if there had been other treatment options available to them, more than just medication... There are patients who enjoy decorating and... we used to do stuff like that with them. They got better, they improved, they were excited and it was better for them... But in the hospital there is nothing except... medication. And I saw that... a patient with psychiatric issues needs a combination of therapies, not just medication (P 83).

#### **8.4.8 Theme 8: Changing perspectives**

This final theme emerged as the analysis considered the changing attitudes expressed by the participants in relation to the educational interventions provided as part of the present study combined with the influence of the clinical placement.

The interviews revealed that the educational intervention and clinical placement, alleviated many of participants' fears of patients with mental disorders being violent, allowing them to be more accepting of the patients. Interviewees now believed that most psychiatric patients were "not aggressive in any way" (P 80), could behave well and could interact and communicate effectively with others. This change occurred during the



clinical placement, as the student nurses were able to apply their theoretical learning to real-life experiences; for example, one interviewee reported:

...[I was] unable to start a conversation with them because I was afraid they would do something...then it became normal. We could do activities with the patients and sit together...(P 83).

The participants also acknowledged their corrected misconceptions about people with mental disorders. Predominantly student's recognised that patients are more likely to be victims than perpetrators:

...Patients with mental illnesses are fundamentally the same as patients with physical illnesses...(P 86)

...[They] could be hurt more easily than they could hurt...(P 83)

Of particular importance to the present study as an influence on commonly held stigmatising attitudes towards people with mental disorder, was a final assertion by participants that psychiatric patients should not be isolated from society. Through proper treatment, they believed it possible for these patients to return home and resume the activities of everyday life. One participant in the following terms neatly expressed the case against isolation:

These patients experience... temporary symptoms... for a short time... but after treatment and care they can become stable and so we shouldn't isolate them from society... Because if these patients are outcast from society and by their families that will only make their symptoms worse (P 98).

Rather than exacerbating existing alienating attitudes and behaviours, the new knowledge and experiences of this cohort of student nurses had challenged their thinking. In short, they now believed it possible to treat psychiatric patients as 'normal' patients, as human beings, with dignity and respect:

I learnt that patients with mental illnesses are fundamentally the same as patients with physical illnesses, that there isn't a difference between the two. They each require special care and treatment. And it's quite okay for me to become a psychiatric nurse. There isn't a problem in me becoming one (P 86).

## 8.5 Conclusion

The process evaluation embedded within the study design of the present work provided in this chapter, offered valuable insight into the underlying and changing attitudes, knowledge and beliefs of the participant student nurses. The findings of the thematic analysis served to provide an explanation for the outcomes of the statistical analysis contained in the previous chapter, while also prospectively highlighting those features requiring greater emphasis in the educational intervention of a future definitive RCT. In theme 1 (raised awareness – challenging perceptions and beliefs) the potential for recovery and return to routine domains of everyday life was a key message that the student nurses raised. It was discussed in regards to the intervention and the clinical placement. A future definitive RCT would benefit from emphasising this aspect as it impacted on how the participants approached and treated the patients. Theme 2 (expectations versus reality) and theme 3 (learning through taught content and social contact) highlighted an important differentiation between the violent and aggressive patients the student nurses were expecting to encounter, and the reality of what they actually witnessed. Theme 8 (changing perspectives) captured this change in perspectives, as the student nurses considered how they now believed people with mental disorders could and should be treated. Themes 4 to 7 (hospital environment; staff attitudes and behaviour; patient behaviour; therapeutic activity) contained interesting insight into the developing understanding of mental health care provision in Saudi, particularly in relation to the challenges facing people with mental disorders in treatment and recovery. Lack of clean facilities and stimulation were observed and considered detrimental to recovery. The virtual contact from the intervention, coupled with the experiences of social contact from the clinical placement challenged this preconception. This led many of the students to challenge their own attitudes and beliefs towards people with mental disorders in a positive light. The next chapter contains a full summary of the themes and their contribution to the feasibility/piloting phase of this study, drawing out the significance of the findings to the overall progression of this work in its preparation for a future definitive RCT.

## **CHAPTER 9**

### **Discussion and Conclusion**

#### **9.1 Introduction**

This chapter discusses the overall findings of the research study providing an interpretation with implications for policy, practice and research. Chapters 1, 2 and 3 are not included within this final summary chapter as they served to provide background and methodological information that does not inform the implications of the present study for wider practice. Therefore, within this final chapter, Section 9.2 first summarises and discusses the main findings of the development phase (Chapters 4, 5 and 6), then considers the findings of the feasibility phase (Chapters 7 and 8), which included the exploratory RCT and its process evaluation using qualitative interviews. Section 9.3 addresses the methodological issues encountered throughout the two phases of the study, reflecting on its strengths and limitations. Section 9.4 discusses the study results in relation to the wider body of evidence-based literature. Section 9.5 considers the implications of the research for clinical practice and policy, and the development of future research, before Section 9.6 concludes the thesis.

#### **9.2 Summary of main findings**

The following sections draw out the main findings from the development and feasibility/piloting phases of the MRC framework for the development and evaluation of complex interventions as detailed in Chapters 4 to 8.

##### **9.2.1 Development phase: theoretical exploration, systematic review & usability study**

###### ***Theoretical exploration***

The development phase of the study considered theoretical approaches to inform the development of the research agenda of the overall study. Chapter 4 examined theories of stigma, exploring the underpinnings of public stigma related to mental illness and the ways in which this is developed and maintained. The chapter also considered methods of stigma reduction, discussing interventions and components of interventions that could be considered as of importance for further development.

The theoretical review determined that stigmatisation has a detrimental impact on people with mental disorders, manifesting itself predominantly through attitudes, knowledge and behaviour (Chapter 4, Section 4.5, Table 4.1). The findings from the analysis of research into stigma-reducing strategies suggests that education, protest and contact are the key approaches used in reducing stigma and challenging its negative impact.

### *Systematic review*

Chapter 5 presented a systematic review of literature, providing an in-depth analysis of studies that had applied interventions to reduce mental disorder-related stigma in healthcare professionals. The chapter aimed to describe and consider different stigma reduction interventions, evaluate their effectiveness and identify characteristics of these interventions that were the most potent in reducing stigma towards mental illness. The final sample of 16 studies all assessed adult healthcare professionals (including those in training) and were RCTs (including cluster trials), CCTs or CBA studies. In addition, each study assessed one or more of the three key areas outlined in the theoretical exploration, namely knowledge, attitudes and behaviour. The review itself was conducted in order to fill in a gap in the literature, in that no comprehensive and recent review had critiqued mental disorder stigma reduction interventions among healthcare professionals. The goals of the systematic review were to provide such a critical analysis and to inform the design of the intervention.

Thus, on the basis of the review, it was recommended that future research design should adhere to stricter protocols in order to increase the quality of the research in this area. It was suggested that further research should assess multicomponent interventions, including contact and education, in line with the Cochrane recommendations, in particular those focusing on selection bias. Furthermore, RCTs would be the most suitable in this area, in order to compare each intervention with a control condition. Finally, it was suggested that the use of well known and validated measures for the assessment of outcome measures would lead to increased reliability and the reduction of bias. These recommendations informed the design of the study.

### *Usability study*

Chapter 6 presented a usability study in order to demonstrate the move from theoretical to development in the modelling, building and testing of the intervention prototype. This was the final stage in developing a suitable intervention protocol in order to carry out the

feasibility/pilot study as an exploratory randomised trial of the full intervention. It was also essential to identify the protocol in relation to the target population and in relation to user experiences that would be of relevance to them.

A number of themes were concluded to be of importance to the development phase, including theoretical conceptualisation, research design, the components and content of the intervention, and outcome measures. It was noted that studies with theoretical underpinnings were conceptually better able to address the outcome measures. As the conceptual framework of Thornicroft (2006) was the only one to have included education in relation to the conceptualisation of stigma, it was used in the conceptualisation of the usability study.

As to research design, it was concluded that an RCT would be most valuable in terms of comparison and that there should be contact conditions, whether actual or simulated, and an educational component. The content would educate participants on a range of disorders and outcome would be assessed using well-known and validated scales in order to address concerns about the lack of consistency in previous research. For this reason, the MICA, SCILO and RIBS scales were used. The usability study was designed with consideration of the NICE guidance on the development and evaluation of behaviour change interventions at population and individual levels (NICE, 2007).

The usability study led to the identification of relevant research materials for the contact condition, in the form of simulated video contact. The choice of materials was part of the iterative and collaborative process of building the prototype with an expert advisory group, ensuring that they were subject to peer review by healthcare professionals. Post intervention, changes were made to the study design, allowing for the refinement of the intervention prototype before conducting the feasibility/pilot phase.

### **9.2.2 Feasibility phase: exploratory RCT and process evaluation interviews**

The feasibility phase of the study incorporated conclusions from the theoretical exploration, systematic review and usability study in order to address the feasibility of the intervention to reduce stigma in nursing students in Saudi Arabia. A mixed methods approach was employed, comprising of an exploratory RCT (Chapter 7) followed by a process evaluation using interviews (Chapter 8). The findings are detailed below in turn.

### ***Feasibility of the exploratory RCT***

The RCT was conducted with 160 participants to evaluate the potential effectiveness of the educational intervention against its comparative conditions at baseline, post-intervention and at three-month follow-up. A filmed educational intervention on DVD, depicting the experiences of service users and their carers, aimed to reduce mental disorder-related stigma among nursing students in Saudi Arabia. There were 19 clips, five in Arabic and the remaining 14 in English, forming the simulated contact intervention that was compared with a PowerPoint lecture condition. Both educational conditions were delivered to 3<sup>rd</sup> and 4<sup>th</sup>-year students with participants from each year randomly allocated to one of the two educational conditions. The students' regular lecturers delivered these two educational conditions, as per the recommendations of the usability study focus group. A control group of 2<sup>nd</sup>-year students received education as usual, with no mental disorder-related stigma component. In line with the findings of the theoretical exploration and systematic review, primary outcome measures were chosen for their good internal consistency and test-retest reliability, which were confirmed during the study: MICA was used to measure attitudes, RIBS to assess intended behaviour and SILCO to assess knowledge. In addition, CLEI was used to measure the positivity of the clinical placement. The post-intervention (T1) concluded with three open-ended questions of what the nursing students liked the most, the least and what they felt was missing from the educational intervention.

The summary of the feedback from the open-ended questions found that the students were predominantly favourable towards both the educational intervention (DVD, PPT). For the DVD group this was particularly in relation to witnessing real people speaking about their conditions and experiences. The benefit of this element was reflected in the main suggestion for development of the comparative condition (PPT), whereby students requested inclusion of contact with people with mental disorders.

### ***Analysis of the process evaluation***

The process evaluation was conducted using a thematic analysis of semi-structured face-to-face interviews following the exploratory RCT, with a 16-participant convenience sample. This allowed for consideration of participants' views on changes to the intervention in order to optimise it for a further definitive RCT. An inductive approach allowed for the identification of themes within the data. The evaluation had two main

objectives: to describe the views of the nursing student participants about what salient events within the clinical placement influenced their perspectives on people with mental disorders, and to test the acceptability of the intervention by exploring their views of the intervention in relation to their clinical placement. Eight themes were identified and discussed: perceptions and beliefs; expectations versus reality; learning through taught content and social contact; hospital environment; staff attitudes; patient behaviour; therapeutic activities, and changing perspectives.

Participant's current beliefs about mental disorders after the intervention and clinical placement indicated that they felt it was possible to treat psychiatric patients as normal patients because aggression is not often a feature of mental illness. Many supported the notions that there was no difference between patients and everyone else, that they should not be separated from society and that they could recover. The participants explained that their perspectives had changed positively and that they recognised the damage stigma can do to recovery.

## **9.3 Methodological critique**

### **9.3.1 Strengths**

The present study comprised a novel intervention that employed a mixed-method design in accordance with the guidelines of the MRC complex interventions framework (Craig et al., 2008), in addition to a staged approach. It was suggested that the use of a qualitative method would complement the quantitative design (Greene, 2007), provide an improved understanding of the 'how' and 'why' in intervention optimisation (Oakley et al., 2006), improve validity (Greene, 2007) and enable more reliable conclusions to be drawn (Johnson and Onwuegbuzie, 2004; Datta, 1994; Tashakkori and Teddlie, 1998).

The educational intervention was grounded in theory and culturally appropriate, meeting the criticism that previous research had not been testing enough stigma reduction techniques that were informed by theory-based models (Corrigan et al., 2000) and that too few studies were considered to be cross-cultural. The inclusion of a development phase in the study allowed for detailed understanding of the research area to be acquired and considered in the study design. The research itself was informed by Thornicroft's (2006) conceptualisation, which allowed for the assessment of an educational intervention tackling knowledge, attitudes and intended behaviours. This theoretical

underpinning allowed for a deeper analysis of the components required before seeking suitable methodology on the basis of a systematic review of both English and Arabic research. Furthermore, the inclusion of discrimination was addressed by the assessment of intended behaviours and was previously noted to be lacking from this body of research (Rusch et al., 2005; Clement et al., 2013).

The study considered the views and experiences of service users, which were noted as lacking from a majority of studies in this area. Link & Phelan (2001) found that many studies had failed to consider the direct experience of stigmatisation, relying too heavily on a theoretical or conceptual understanding of the phenomenon. This lack of service user input, widely identified as a flaw in previous research (Thorncroft, 2006), has been remedied in the present study. The paucity of high quality studies in this area was considered to result partly from an inadequate focus on dual diagnoses in favour of single-disorder interventions (Pinfold et al., 2005). This was addressed in the current study by its focus on a number of types of disorders as a general intervention on mental disorder-related stigma.

The systematic literature review also identified weaknesses in previous research in terms of bias. A process of assessing bias as part of review was considered to be crucial, as recommended by Higgins and Green (2008). Therefore, reported studies were analysed in line with the Cochrane Collaboration's tool for assessing the risk of bias, which identified issues relating to a lack of RCTs in the research area, and issues relating to selection bias and multicultural studies with large samples. Information was extracted from studies in line with CCCRG recommendations, which allowed for key realisations to be addressed, including the need for more studies with adequate blinding, randomisation, controls and follow-up (Dalky, 2012).

This structured approach allowed for these aspects of study design to be considered in planning the usability study and hence the exploratory RCT. The study not only included an RCT, but also featured a three-month follow up, providing insight as to the potential longevity of the impact of the stigma reduction intervention(s). Selection bias was minimised by the appropriate use of computer-generated random allocation and suitable blinding (allocation concealment) during the study, the absence of which has previously been noted as a cause of selection bias (Higgins and Green, 2008). Additionally, the present study addressed stigma reduction in an under-researched population of healthcare



professionals over three time points, thus addressing two further weaknesses identified by the review of literature.

The development phase of the study allowed for the detection of logistical issues in the lead-up to the feasibility phase, such as deciding when to collect data, changing the terminology in some parts of the study, ensuring mobile phones were turned off and placing signs on doors. The use of a feasibility study is considered to be fundamental in research (Lancaster et al., 2004; Thabane et al., 2010) and it was important to pilot the study prior to conducting an RCT of this nature (Craig et al., 2008). The pilot was conducted in line with MRC guidelines in order to measure dropout rates, which were found to be below the required 15% level.

The study employed a number of methods in order to improve the reliability of findings. These included the use of validated scales with good internal consistency and inter-rater reliability, testing participants in their usual environment, making the study high in ecological validity, delivering comparative interventions of similar lengths, collecting baseline scores immediately before the intervention and post-intervention scores immediately after it and concurrently, to reduce contamination due to participants discussing their intervention conditions. Furthermore, the study adhered to appropriate ethical guidelines with regard to encrypted data storage, consent and right to withdraw.

The inclusion of the process evaluation using interviews provided rich detail regarding the intervention and its memorable features, participants' expectations and experience of the clinical placement, and changes in their views regarding mental disorders. The use of thematic analysis was rigorous and applied in line with the recommendations of Braun and Clarke (2006).

### **9.3.2 Limitations**

Limitations of this study should be considered. First, in relation to the decision making process of the component analysis that took place in the systematic review in chapter 5. A component analysis was used in this study to identify and distinguish the active components of the educational interventions that can bring about a change in attitudes, behaviour and knowledge. According to Ward-Horner and Sturmey (2010) a review on how to conduct a component analysis does not currently exist in the literature. Therefore the component analysis used in this study was limited in that it relied heavily on the

frequency of the intervention components occurring. Furthermore, there were a number of occurrences in which one component could be subdivided into two or three independent components, which made the differentiation between the active components challenging at times.

Second, with regards to the study sample, which was all female, reducing the relevance of the findings to male nursing populations. However, the studying of female nurses is of considerable interest for comparative purposes, given that the majority of nurses working in mental health settings in Saudi Arabia are male. In terms of the cultural diversity of the sample, participants in the study, which took place at a single site, a public university in Jeddah, were mostly of Saudi Arabian nationality, with the exception of a few Yemeni nationals. This limits the generalisability beyond this population of the findings regarding the effectiveness of the intervention. As private universities are more likely to have a multicultural student population, it is recommended that a future study should be conducted in that setting, to assess the potential for the intervention to be effective among diverse cultures. This is particularly relevant in that the majority of nurses working in Saudi Arabia are expatriates. Conducting the present study at multiple sites would have allowed for more diverse populations to be included and compared.

A further limitation is with respects to the use of the MRC framework for the development and evaluation of complex interventions, which has been criticised due to its inclusion of a mixed methods approach. Blackwood and colleagues (2010) argue that by including a mixed methods approach the MRC framework presents a clashing ontology and fails to express clearly the link between the relativism of qualitative approaches and the positivism of RCTs. On the other hand, it has also been argued that by combining qualitative and quantitative approaches in a mixed methods research a state of comprehensiveness and greater understanding can be achieved (Farquhar et al., 2011). Perhaps one of the most notable challenges of using the MRC framework is with respect to the integration and synthesis of the data (O'Cathain et al., 2007). With the mixed methods approach used in this study, there was a tendency to report the findings of each phase separately as a standalone study. Although the MRC framework is an iterative process and at points the findings did overlap it was challenging to present the findings in a way that would maximise the value of using a mixed methods approach.

This study was the first of its kind and so a purposive sample was used. The study may not have been adequately powered to test all the statistical hypotheses. Cohen (1992) suggests that a sample size of 128 (64 in each group) is required to test a medium size effect (mean difference = 0.5 standard deviation) with 80% power at the 5% level of significance (two tailed test) and sample size of 52 (26 in each group) is required to test a large effect (0.8 SD). A further study is therefore required to confirm these exploratory findings. The findings from the current study can be used to inform the sample size of the definitive RCT. In terms of the study design, there were inbuilt confounds in that the samples were recruited from three different years of training. Although this was controlled for during the analysis and was necessary in order to increase the relatively small sample size, it is likely that acquired knowledge as the years progressed would have affected the results of the study to some extent, particular for 4<sup>th</sup>-year students, who also took their clinical placement in that year.

Also with regards to the modelling phase of the intervention the expert advisory group was limited to mainly academic mental health care professionals that only see service users at outpatient clinics. It would have been interesting to include clinical staff nurses perspectives on the intervention prototype seeing that they are the ones in direct contact with service users while admitted on the mental health wards. This limitation is to be considered in the future definitive RCT.

As to the chosen outcome measures, although these were considered to be of high validity and reliability, they were all self-reported and may have been influenced by social desirability. Furthermore, other studies suggest that the findings could be argued to be speculative, particularly in relation to the SCILO test used to assess knowledge, due its low reported reliability and its not being an official scale.

Although the usability study allowed for a choice to be made for students' usual lecturers to deliver the interventions, social desirability may have still influenced the outcomes, as the PPT presentation, unlike the DVD intervention, was delivered by a familiar lecturer. The PPT was also slightly longer than the DVD, despite the researcher's attempt to match them in duration. A further potential limitation is the fact that the DVD session did not include a discussion after the screening, to avoid influencing the participants and masking the effect of the intervention itself, whereas members of the PPT group are likely to have had the opportunity to ask questions during their session, which might have

affected the results. It is therefore recommended that a future study should allow only related questions and discussion at the end of the session, for both interventions.

With regard to the thematic analysis, the number of interview participants differed between the interventions. It would have been beneficial for an equal number of participants from each of the DVD and PPT conditions to be interviewed, in order to acquire a balanced set of opinions regarding the impact of the interventions. A future study would benefit from conducting follow-up at an earlier stage, perhaps on the last day of the clinical placement, and with greater numbers than required, in order to secure a larger and more balanced sample of participants.

There is a risk of bias throughout this thesis. This is acknowledged first in the possibility of interpretation bias during qualitative analysis, despite the researcher's best efforts to be thorough and factual. A secondary analysis by an independent bilingual researcher would have helped to reduce the risk of such bias. In addition, although both English and Arabic literature was considered, the choice of studies may have been affected by publication bias in the type of studies that were selected by journals, and any such bias may well differ between the two language cultures. Similarly, of the reviewed studies, each had its own risk of bias in findings, as none had adhered completely to the Cochrane recommendations on assessing bias (see Table 5.3 'Summarised study quality and risk of bias assessment' in Chapter 5).

The final limitation concerns the hypothesized impact of contact to reduce stigma, given that neither the DVD intervention nor the clinical placement were everyday settings. It may be that contact in a social setting and with greater equality between participant and service user (Corrigan and Penn, 1999) would have produced a more pronounced reduction in stigma. However, although this may be the case, the contact as simulated in the DVD and during the clinical placement was considered to be highly relevant to nursing students.

## **9.4 Discussion of results**

### **9.4.1 Views on stigma in mental health**

The present study has indicated, in line with Thornicroft's (2006) conceptualisation, that stigma is an issue relating to knowledge, attitude and behaviour. Firstly, stigma was rife

and highly reported in the samples at baseline and considered in detail in the thematic analysis of the interviews at follow-up. Participants acknowledged their awareness of stigmatising attitudes in themselves and in the population at large. Interviewees identified stigma as a very serious issue for their patients, for example in terms of social rejection, of families failing to visit them and of bad treatment by staff. They also registered an awareness of their own efforts to be kind and neutral towards patients so as not to alienate them further. This is consistent with the literature on stigma which identifies this as an additional area of distress for those with mental disorders to deal with (Corrigan et al., 2000; Rush et al., 2005), as well as the literature relating to social rejection and avoidant behaviour (Padmavati, 2014) and to stigma by association (Ostman and Kjellin, 2002), demonstrated by the reluctance of families to visit patients. Finally, the types of stigmatising beliefs that participants reported having prior to the intervention were in line with more general research.

Participants described their own stigma experiences prior to the intervention and suggested that this had affected their behaviour. They acknowledged having little accurate information about mental illness prior to the intervention and its comparative condition, and to wanting to keep their distance from those with mental illness, consistent with the work of Padmavati (2014) on social rejection. Interview data suggest that these negative views were influenced by public perceptions and media depictions of mental illness, in line with the findings of a number of researchers of a lack of accurate knowledge about mental illness in the general public (Thorncroft et al., 2007) and more surprisingly, amongst professionals (Mukherjee et al., 2002; Fernando et al., 2010; Yamauchi et al., 2011). Recurrent themes included fear of violence by those with mental disorders and surprise that such behaviour was uncommon, for example in the clinical placement. This misplaced expectation of violence, aggression and dangerousness (Pescosolido et al., 1999) was repeatedly reported by the sample and is consistent with the finding of Yamauchi et al. (2011) that those in psychiatric training and student nurses associated people suffering from mental disorders with negative words and labels such as 'scary'. Similarly, Jones et al. (1984) found that stigma was associated with perceived dangerousness.

A small number of participants also reported feeling pity for those in mental hospitals, perhaps indicative of beliefs of inferiority (Corrigan and Penn, 1999) or the view that

those with mental disorders were naïve and should be avoided. Post intervention, by contrast, participants acknowledged that these beliefs were largely mistaken; fear and avoidance appeared to be replaced by an understanding of the different severities of mental illness and that those suffering from mental illness are ‘normal’ people who can be interacted with in a ‘normal’ way for the most part.

Discriminatory behaviour was reported to take place in the hospital setting. The findings suggest that those taking part in the clinical placement felt that treatment for hospitalised patients was unacceptable, unhygienic and heavy handed, involving little positive engagement by the hospital staff. This aligns with the finding of Lawrie (1999) that those with mental disorders received a lower quality of care than those suffering from physical illness. It also reflects the existence of issues such as unfair treatment and denial of human rights for those with mental illness (Padmavati, 2014) in the healthcare system in Saudi Arabia, and is indicative of commonly reported mistreatment by healthcare professionals (Wahl and Aroesty-Cohen, 2010; Ross and Goldner, 2009; Mukherjee et al., 2002; Aydin et al., 2003; Ucok et al., 2006; Thornicroft et al., 2010; Fernando et al., 2010).

Conversely, participants did not discuss in any detail a number of topics raised in the stigma literature, including the impact of stigma on treatment-seeking behaviour and withdrawal from treatment (e.g. El-Gilany et al., 2010; Andrade et al. 2014). For example, it was unclear how many patients in the psychiatric hospital were there voluntarily and how many under compulsion; hence it was not clear whether withdrawal from treatment was observed in clinical placements. However, in terms of the impact of treatment and recovery, participants did note that more interactive engaging activities with the psychiatric patients were beneficial and this approach to treatment yielded immediate benefits. This is consistent with literature on the impact of stigma as a concept on treatment and recovery (Thornicroft, 2006; Corrigan et al. 2011; Calabrese, and Corrigan, 2004; Wahl, 1999; Hansson et al. 2013).

Another aspect of stigma that was not raised in the study and thus not supported by the findings was its relationship to housing and employment (Manning and White, 1995; Crowther et al. 2001; Lasalvia et al. 2013; Little et al., 2011; Padmavati, 2014). The study also did not address beliefs about the causality or rarity of mental illness (Jones et al., 1984) and their effect on stigma-related attitudes and behaviour. Overall, however, the findings strongly support the view of stigma offered by Thornicroft’s threefold model

(2006), as a lack of knowledge (ignorance) was observed in relation to stigmatising attitudes (prejudice), alongside discriminatory behaviour.

#### **9.4.2 Applicability of the intervention**

According to Steckler et al. (1995), the purpose of a health education intervention is to influence health status positively. The appropriate way to assess this in relation to stigma was identified as measuring changes in outcomes such as knowledge, behaviour and attitudes, which would in turn bring about identifiable and measurable changes in health status (Steckler et al. 1995). In review, the interventions used were highly replicable, cost little to deliver and could be applied to the reduction of stigmatising views among nursing students in Saudi Arabia. Post-intervention change scores suggest that both educational interventions had a positive impact, reducing stigma, increasing knowledge and improving the suitability of intended behaviours. At follow-up and after adjusting for baseline scores, however, there were no sustained benefits of the intervention, suggesting that whilst such an intervention is definitely required and useful, long-term stigma reduction might require maintenance with more frequent and/or long-term interventions.

Regarding attitudes, this suggests that the 4<sup>th</sup>-year students may have acquired additional learning and experiences that had reduced their stigma scores in addition to the intervention. The adjusted analyses relating to intended behaviours and knowledge indicated that each of the conditions had been equally beneficial at improving intended behaviours. In relation to intended behaviours, neither of the education conditions had any beneficial effect on scores, despite improved post-intervention changes. In terms of knowledge, follow-up findings suggest that the DVD was informative for the 3<sup>rd</sup>-year students in terms of increasing knowledge to the standard of a 4<sup>th</sup>-year student, indicating that the 4<sup>th</sup>-year students had acquired more knowledge than the 3<sup>rd</sup>-year students, possibly due to the clinical placement. This means that the DVD was not as useful as it would otherwise have been, while the PowerPoint lecture was more beneficial.

#### **9.4.3 Relationship between findings and previous research**

The findings presented in this thesis support suggestions in the literature that education and training are capable of defeating myths about mental illness, such as that it is incurable or that sufferers are violent, dangerous people (Rusch et al., 2005). The study

also supports the contact hypothesis of Allport (1954), although there was little difference between the contact and no-contact interventions immediately prior to delivery and none at three-month follow-up. This therefore conflicts with the suggestion in the literature that contact is more effective than education at reducing stigma. However, this thesis still supports the strong advocacy in the literature for contact and its use in reducing prejudice (Yamauchi et al., 2011; Rusch et al., 2005; Corrigan et al., 2011), even when contact is simulated. The present study also evidenced a number of themes in relation to stigma that have been highlighted by Hamilton et al. (2014). Of these, organizational decisions, mistreatment, social distance, stereotyping, being judged, lack of understanding or support, and dismissiveness were raised as points during the qualitative review. However, there was a lack of support for the presence of over-protectiveness, the seventh and final theme discussed by Hamilton et al. (2014). Whilst this was implied in the literature, for example where stigma was associated with beliefs about mental illness being associated with naivety or the need for protection, this was not observed as part of the stigmatising beliefs themselves.

Furthermore, despite the lack of a lasting impact on stigma reduction at follow-up, the interviews and qualitative thematic analysis suggest that the clinical exposure improved attitudes and intended behaviours towards people with mental illness. This is consistent with research by Tan et al (2005), Madinos et al. (2005) and Yamauchi et al. (2011), all of whom found that clerkship or placement improved stigmatising attitudes. However, this finding was not supported in all studies, and in line with the quantitative findings, it can be suggested here that the present study also failed to show a beneficial impact of the clinical placement after adjusting for pre-placement scores. This is more in line with other research, which found clinical placements to result in no significant changes in outcome measures (Callaghan et al., 1997; Arkar et al., 1997). However, whilst participants in both the DVD and PPT conditions rated the clinical placement as similarly positive, this finding may be related to a lack of equality during contact. Corrigan and Penn (1999) suggest that equality of status during contact was needed in order to produce a positive impact on stigma-related attitudes and behaviour. Although the present study allowed for recovered service users to have equality of status during the DVD intervention, by acting as educators and challenging myths (Collins et al., 2012), this was not the case during the clinical placement. The contact occurring during clinical placements and via the DVD intervention were considered to be positive experiences; nevertheless, it could be argued



that co-operative contact or contact in a social, educational or work setting might lead to more substantial improvements due to evidence of real-life functioning (Corrigan and Penn, 1999), although this was outside the scope of the present research.

The lack of a lasting impact on change scores may indicate, as Crocker et al. (1998) suggest, that negative beliefs are instilled from childhood and maintained through repetition. In order to truly tackle stigma, then, it could be argued there is a need for concurrent protest, such as working towards changes in media portrayal and legislative changes, in addition to contact and challenging negative stereotypes to improve knowledge (Corrigan and Penn, 1999).

## **9.5 Implications of the research**

### **9.5.1 Implications for clinical practice and policy**

This thesis has outlined an urgent need for the awareness of mental disorder-related stigma to be addressed in clinical practice and policy. Part of the problem appears to be that at present there is no mental health nursing programme in Saudi Arabia, so nurses receive no professional mental health education, yet are recruited to work in a psychiatric setting. The only relevant training is in the form of the mental health module in the fourth year of general nursing training. Nurses who work in mental health settings learn on the job and by experience, which is not always beneficial. Therefore, there is clear potential to develop mental health training programmes in the form of a diploma course or separate mental health nursing programmes.

The value of protest against negative media depictions of mental illness has been highlighted in a number of works of literature, but little has been done in relation to this in Saudi Arabia. Organisations such as BASTA (Rusch et al., 2005) have shown that the involvement of the news and entertainment media is paramount in encouraging long-term changes in perceptions of mental disorder. Whilst it has been argued that this type of movement may reduce the impact of stigma, it has not been shown to replace negative stereotypes with more positive belief systems. Therefore, an equal if not greater focus is needed on ensuring that accurate knowledge about mental disorders is disseminated, especially among healthcare professionals.

This thesis has highlighted the need for legislative changes that focus on equal rights, insurance and healthcare, in line with the changes underway in Western cultural contexts (Corrigan and Penn, 1999). The Saudi mental healthcare law was approved in 2012 but did not immediately come into force. It is recommended that the lawmakers should take note of the present findings and consider the need to include mental health and stigma reduction training when revising the law. If policy were informed by such findings, this would facilitate a better understanding of mental disorders and the reduction of the damage done by stigma based on inaccurate information. It is therefore proposed that a future definitive RCT could address stigma with a view to providing information for such legislative changes on the basis of research recommendations.

### **9.5.2 Implications for future research**

Other areas that could be considered during a definitive RCT include discussions with service users regarding housing, employment, self-stigmatisation and legislative unfairness. In addition, it would be beneficial to trial more diverse versions of the interventions in order to provide more difference between the DVD and PPT conditions. For example, in the contact condition, the inclusion of filmed simulated interactions between service users and healthcare professionals, as was suggested during feedback, might prove beneficial to participants. Co-operative contact could also be tried, perhaps via group work or with a service user delivering part of the content in person, to assess the impact on results. It would also be interesting to consider how beliefs about the causality of mental disorders influence stigmatising views.

With regard to the population, it would be beneficial to include male participants in this type of study and to match the year of study in order to avoid confounds which weakened the present study. Other potential target populations for this type of study would be journalists, recruiters and adolescent students, in order to ascertain whether earlier intervention would have better effects.

## **9.6 Conclusion**

The present study has addressed mental health-related stigma in healthcare professionals using a mixed-methods design adhering to the guidelines for reduction of bias and testing of interventions. A need for urgent intervention has been highlighted in this target population of healthcare professionals, where stigma and related negative attitudes and

discriminative behaviour have been uncovered and reported in detail. Given that no such stigma reduction interventions are currently provided in Saudi Arabia, this research seeks to support the use of such interventions as part of the standard training of nursing students, in order to better prepare them for work in the field and to protect the interests of those suffering from mental illness, including patients in a psychiatric setting. Given that both interventions trialled in this work had varied benefits at different time points in the academic programme, it is suggested that both would be desirable, but that either one is better than none. However, the long-term impact of these interventions remains to be assessed and this would require longer-term follow-up and further research. It is not expected that these potential stigma reduction interventions would work in isolation; legislative changes and media sensitivity to the issue of stigma in mental illness must also move in the right direction in order to increase the effectiveness of stigma-reducing interventions.

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## **Appendices**

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## Appendix 1: Characteristics of excluded studies

Study reference	Reason for exclusion
Aggarwal et al., 2013	Not RCT, CCT or CBA study
Ballon and Skinner, 2008	Not RCT, CCT or CBA study
Baxter et al., 2001	Non-specific intervention
Bayer et al., 2009	No baseline assessment measurements
Bhugra and Hicks, 2004	Not RCT, CCT or CBA study
Bland et al., 2001	Not RCT, CCT or CBA study
Boysen and Vogel, 2008	Participant type unspecified
Brown, 2010	Participants not exclusively health professionals
Brown, et al. 2010	Participants not exclusively health professionals
Bunn and Terpstra, 2009	Does not measure any of stigma key outcomes
Coleman, 2006	Not RCT, CCT or CBA study
Treloar and Lewis, 2008*	Not RCT, CCT or CBA study
Crapanzano et al., 2014	Not RCT, CCT or CBA study
Corrigan et al., 2001	Participant type unspecified
Corrigan et al., 2002	Participant type unspecified
Corrigan et al., 2010	Participant type unspecified
Corrigan et al., 2014	Participants not exclusively health professionals
Corrigan et al., 2013	Participants not exclusively health professionals
Corrigan et al., 2007	Participant type unspecified
Cutler et al., 2009	Not RCT, CCT or CBA study
Dale et al., 2014	Not RCT, CCT or CBA study
Demyan, 2009	No baseline assessment measurements
Dias-Vieira, 2005	Participants not exclusively health professionals
Dipaola et al., 2011	Participants not exclusively health professionals
Ewers et al., 2002	Primary purpose of intervention not relevant
Finkelstein et al., 2007	Participants noted a personal history of mental illness
Finkelstein et al., 2008	Participants noted a personal history of mental illness
French et al., 2011	Not RCT, CCT or CBA study
Galka et al., 2005	Not RCT, CCT or CBA study
Galletly and Burton, 2011	Not RCT, CCT or CBA study
Han et al., 2006	Participants not exclusively health professionals
Hemingway et al., 2013	Not RCT, CCT or CBA study
Hofmann et al., 2013	Not RCT, CCT or CBA study

Iheanacho et al., 2014	Not RCT, CCT or CBA study
Jorm et al., 2010	Participants not exclusively health professionals
Kennedy et al., 1995	Not RCT, CCT or CBA study
Kitchener and Jorm, 2004	Participants not exclusively health professionals
Kitchener and Jorm, 2008	Not RCT, CCT or CBA study
Koike et al., 2014	Participants not exclusively health professionals
Lapshin et al., 2006	Not RCT, CCT or CBA study
Laroi and Van der Linden, 2009	Not RCT, CCT or CBA study
Mann and Himelein, 2008	Participant type unspecified
Markstrom et al., 2009	Not RCT, CCT or CBA study
Masuda et al., 2007	Participants not exclusively health professionals
Matthews, 2009	Participants not exclusively health professionals
Matteo and You, 2012	Participant type unspecified
Michaels et al., 2014	Participants not exclusively health professionals
O'Reilly et al., 2011	Primary purpose of intervention not relevant
O'Reilly et al., 2010	Not RCT, CCT or CBA study
Owen, 2007	Participants not exclusively health professionals
Penn et al., 2003	Participant type unspecified
Penny, 2001	Not RCT, CCT or CBA study
Pittman and Coleman, 2010	Not RCT, CCT or CBA study
Reinke et al., 2004	Participants not exclusively health professionals
Ritterfeld and Jin, 2006	Participant type unspecified
Roberts et al., 2008	No baseline assessment measurements
Sadow et al., 2002	Not RCT, CCT or CBA study
Schmetzer and Lafuze, 2008	Not RCT, CCT or CBA study
Silins et al., 2007	Not RCT, CCT or CBA study
Singh et al., 1998	Non-specific intervention
Steiner et al., 2008	Not RCT, CCT or CBA study
Sullivan and O'Connor, 2001	Intervention targeted other mental disorders
Wahl and Lefkowitz, 1989	Intervention included media reporting of violence
Ucok et al., 2006	Not RCT, CCT or CBA study

\* Study is an RCT but compares against sites and does not compare the intervention to a control or comparison intervention

## Appendix 2: Risk of bias assessment for included studies

1. Clarke et  
al. 2014

Type of bias	Review authors' judgement	Support for judgement
<i>Selection bias.</i>		
<b>Random sequence generation.</b>	Low risk of bias	<b>Quote:</b> 'Participants were randomised to the three interventions, with stratification by level of study and intended specialty, and were given an opaque envelope containing group allocation (for example, group 2, time and location)'.
<b>Allocation concealment</b>	Low risk of bias	<b>Quote:</b> 'Participants were randomised to the three interventions...and were given an opaque envelope containing group allocation. This rendered them masked to group allocation until arrival at the session'.
<i>Performance bias.</i>		
<b>Blinding of participants and personnel</b> All outcomes	Low risk of bias	<b>Quote:</b> 'Randomization was carried out by an independent research assistant with no involvement in the study and no access to person-identifying information'...'Trainers had no direct involvement in data management or analysis, which was conducted by a researcher who was not involved in the training'.
<i>Detection bias.</i>		
<b>Blinding of outcome assessment</b> All outcomes	Uncertain risk of bias	<b>Comment:</b> Outcome assessment was by self-complete questionnaire. However as a control measure, participants were given the Marlowe-Crowne Questionnaire to assess their level of social desirability. <b>Quote:</b> 'Participants with high social desirability scores reported fewer stigmatizing attitudes; participants with low social desirability scores reported more burnout and distress'.

<i>Attrition bias.</i>		
<b>Incomplete outcome data</b> All outcomes	High risk of bias	<b>Quote:</b> '...168 were randomized to PETr or ACTr. Of these, 28 did not complete their pre-training questionnaire pack, did not attend for training, and could not be contacted subsequently (PETr n = 19; ACTr n = 9). This difference in attrition at this stage was significantly different between groups ( $\chi^2 = 4.879$ , $p = .027$ )'.
<i>Reporting bias.</i>		
<b>Selective reporting.</b>	Low risk of bias	<b>Comment:</b> Protocol mentioned. All outcomes reported in methods had data reported in results.

2.Clement et al. 2012

Type of bias	Review authors' judgement	Support for judgement
<i>Selection bias.</i>		
<b>Random sequence generation.</b>	Low risk of bias	<b>Quote:</b> 'Participants were randomised to the three interventions, with stratification by level of study and intended specialty, and were given an opaque envelope containing group allocation (for example, group 2, time and location)'.
<b>Allocation concealment</b>	Low risk of bias	<b>Quote:</b> 'Participants were randomised to the three interventions...and were given an opaque envelope containing group allocation. This rendered them masked to group allocation until arrival at the session'.
<i>Performance bias.</i>		
<b>Blinding of participants and personnel</b> All outcomes	High risk of bias	<b>Comment:</b> Blinding of participants and intervention providers not possible
<i>Detection bias.</i>		
<b>Blinding of outcome assessment</b> All outcomes	High risk of bias	<b>Comment:</b> Outcome assessment was by self-complete questionnaire
<i>Attrition bias.</i>		



<b>Incomplete outcome data</b> All outcomes	High risk of bias	<b>Quote:</b> '360 students consented to participate and were randomised...A total of 216 students attended an intervention'.
<i>Reporting bias.</i>		
<b>Selective reporting.</b>	Uncertain risk of bias	<b>Comment:</b> No protocol mentioned. All outcomes reported in methods had data reported in results
<i>Other bias.</i>		
<b>Other sources of bias.</b>	Uncertain risk of bias	<b>Quote:</b> 'The knowledge and emotional reactions findings are tentative due to the low reliability of these scales'.

### 3. Friedrich et al, 2013

Type of bias	Review authors' judgement	Support for judgement
<i>Selection bias.</i>		
<b>Random sequence generation.</b>	Uncertain risk of bias	<b>Quote:</b> 'At one university, students were randomised by the academic registry to either intervention or control group'.
<b>Allocation concealment.</b>	Uncertain risk of bias	<b>Quote:</b> 'At one university, students were randomised by the academic registry to either intervention or control group. At another, two out of six student groups based at different sites were recruited to the control group.'
<i>Performance bias.</i>		
<b>Blinding of participants and personnel</b> All outcomes	High risk of bias	<b>Comment:</b> Blinding of participants and personnel not possible
<i>Detection bias.</i>		
<b>Blinding of outcome assessment</b> All outcomes	High risk of bias	<b>Comment:</b> Outcome assessment was by self-complete questionnaire
<i>Attrition bias.</i>		
<b>Incomplete outcome data</b> All outcomes	Uncertain risk of bias	<b>Comment:</b> no reasons given for drop-outs
<i>Reporting bias.</i>		
<b>Selective reporting.</b>	High risk of bias	<b>Quote:</b> 'for feasibility the questionnaire had to be short, thus only three items from the CAMI were included instead of either the original scale or the shortened version'

#### 4. Hayes, 2004

Type of bias	Review authors' judgement	Support for judgement
<i>Selection bias.</i>		
<b>Random sequence generation.</b>	Uncertain risk of bias	<b>Quote:</b> 'Possible participants were randomly selected from a master list of licensed or certified alcohol and drug abuse counsellors in Nevada...Possible participants were then randomly assigned to each of the three conditions'.
<b>Allocation concealment.</b>	Uncertain risk of bias	<b>Quote:</b> 'Participants were randomly assigned to be offered specific forms of training, but they knew of the specific workshop and only about one third accepted, which could readily lead to selection biases with unknown impact'.
<i>Performance bias.</i>		
<b>Blinding of participants and personnel</b> All outcomes	High risk of bias	<b>Comment:</b> Blinding of participants and personnel not possible <b>Quote:</b> 'Cross-contamination was not controlled because therapists in the same work setting could be assigned to different conditions'.
<i>Detection bias.</i>		
<b>Blinding of outcome assessment</b> All outcomes	High risk of bias	<b>Comment:</b> Outcome assessment was by self-complete questionnaire. <b>Quote:</b> 'Follow-up was both short and entirely self-report'.
<i>Attrition bias.</i>		
<b>Incomplete outcome data</b> All outcomes	Low risk of bias	<b>Comment:</b> No missing outcome data
<i>Reporting bias.</i>		
<b>Selective reporting.</b>	Uncertain risk of bias	No protocol. All outcomes mentioned in measures section were reported in results section

Type of bias	Review authors' judgement	Support for judgement
<i>Selection bias.</i>		
<b>Random sequence generation.</b>	Uncertain risk of bias	<b>Quote:</b> 'The study was a randomized controlled trial conducted at three sites'.
<b>Allocation concealment.</b>	Uncertain risk of bias	<b>Quote:</b> 'students were randomized to either receive the intervention, or not, early in their mental health unit'.
<i>Performance bias.</i>		
<b>Blinding of participants and personnel</b> All outcomes	High risk of bias	<b>Comment:</b> Blinding of participants and intervention providers not possible
<i>Detection bias.</i>		
<b>Blinding of outcome assessment</b> All outcomes	High risk of bias	<b>Comment:</b> Outcome assessment was by self-complete questionnaire
<i>Attrition bias.</i>		
<b>Incomplete outcome data</b> All outcomes	High risk of bias	<b>Quote:</b> 'The highest number of dropouts came from Memorial University and the University of Saskatchewan. Attrition can be a source of bias in this type of study. The rate of successful follow-up for the individual schools was 32.3% (Memorial), 40.0% (Saskatchewan), and 76.9% (Dalhousie)'.
<i>Reporting bias.</i>		
<b>Selective reporting.</b>	Low risk of bias	<b>Comment:</b> Study protocol not available but clearly presents all expected outcomes

Type of bias	Review authors' judgement	Support for judgement
<b>Selection bias.</b>		
<b>Random sequence generation.</b>	Uncertain risk of bias	<b>Quote:</b> 'A cluster-randomized trial design was used to evaluate the impact of contact-based educational interventions delivered at two points in time.'
<b>Allocation concealment.</b>	Uncertain risk of bias	<b>Quote:</b> 'We conducted a cluster-randomized, "wait-list" controlled trial to evaluate the impact of a one-time contact-based educational intervention on the stigma of mental illness as measured by attitudes among medical students as compared with a multimodal undergraduate psychiatry course that integrates contact-based educational strategies'.
<b>Performance bias.</b>		
<b>Blinding of participants and personnel</b> All outcomes	High risk of bias	<b>Comment:</b> Blinding of participants and intervention providers not possible
<b>Detection bias.</b>		
<b>Blinding of outcome assessment</b> All outcomes	High risk of bias	<b>Comment:</b> Outcome assessment was by self-complete questionnaire
<b>Attrition bias.</b>		
<b>Incomplete outcome data</b> All outcomes	High risk of bias	<b>Quote:</b> 'Of the 179 student's eligible to participate in the study, 111 completed a baseline survey (62.0%). Of these, 81.0% (n=90) completed the second survey, 86.5% (n=96) completed the third survey and 52.1% (n=50) completed the 3 month follow-up survey. Although 96.1% (n=172) of the class responded to the third survey, only data from students who completed the baseline survey was used to assess the impact of the contact-based interventions'.
<b>Reporting bias.</b>		
<b>Selective reporting.</b>	Uncertain risk of bias	<b>Comment:</b> No protocol mentioned. All outcomes reported in methods had data reported in results

Type of bias	Review authors' judgement	Support for judgement
<b>Selection bias.</b>		
<b>Random sequence generation.</b>	Low risk of bias	<b>Quote:</b> 'Through the use of a table of random numbers, nine students were selected to form the experimental group from the group of students (N=27) whose score fell above the median factors A (Authoritarianism) and D (social restrictiveness)'. The remaining students constituted the control group'.
<b>Allocation concealment.</b>	Low risk of bias	<b>Quote:</b> 'Students whose scores fell above the median on authoritarianism and social restrictiveness were randomly assigned to experimental and control groups'.
<b>Performance bias.</b>		
<b>Blinding of participants and personnel</b> All outcomes	Uncertain risk of bias	<b>Quote:</b> 'Having two different experimenters, one administering the OMI and the other conducting the simulation games served to prevent subjects from assuming that the pre and post-testing and the experimental manipulation were related'.
<b>Detection bias.</b>		
<b>Blinding of outcome assessment</b> All outcomes	High risk of bias	<b>Quote:</b> 'Having two different experimenters, one administering the OMI and the other conducting the simulation games served to prevent subjects from assuming that the pre and post-testing and the experimental manipulation were related'. <b>Comment:</b> Although the precautions above were taken the assessment was by self-report questionnaire and so the study was rated as high risk.
<b>Attrition bias.</b>		
<b>Incomplete outcome data</b> All outcomes	High risk of bias	<b>Quote:</b> 'Seven of the nine individuals contacted agreed to participate'.
<b>Reporting bias.</b>		
<b>Selective reporting.</b>	Uncertain risk of bias	<b>Comment:</b> No protocol mentioned.

8. Meng et al.,  
2007

Type of bias	Review authors' judgement	Support for judgement
<i>Selection bias.</i>		
<b>Random sequence generation.</b>	High risk of bias	<b>Quote:</b> 'Our study has limitations. Its design was not randomized.'
<b>Allocation concealment.</b>	High risk of bias	<b>Quote:</b> 'We feel that this lack of randomization did not introduce selection bias, because both groups were comparable demographically and responded similarly to the initial survey'.
<i>Performance bias.</i>		
<b>Blinding of participants and personnel</b> All outcomes	High risk of bias	<b>Comment:</b> Blinding of participants and intervention providers not possible
<i>Detection bias.</i>		
<b>Blinding of outcome assessment</b> All outcomes	High risk of bias	<b>Quote:</b> 'Responses to the survey were anonymous...the clerkship coordinator assigned a code number to each student to link their scores on the surveys at the beginning and midway points of the clerkship'. <b>Comment:</b> Despite anonymity of the assessment, it was by self-report questionnaire and so the study was rated as high risk as it still poses a social desirability risk of bias.
<i>Attrition bias.</i>		
<b>Incomplete outcome data</b> All outcomes	Low risk of bias	<b>Quote:</b> 'All 117 consecutive medical students provided written consent...None declined enrolment. The survey was answered completely by 117 students at the beginning and by 104 students (52 in each group) at the midway point. Thirteen students did not attend the midway meeting and did not complete the survey'.
<i>Reporting bias.</i>		
<b>Selective reporting.</b>	Uncertain risk of bias	<b>Comment:</b> No protocol mentioned.

9. Mino et al., 2001

Type of bias	Review authors' judgement	Support for judgement
<i>Selection bias.</i>		
<b>Random sequence generation.</b>	High risk of bias	<b>Comment:</b> Non-randomised pre-post with control study design
<b>Allocation concealment.</b>	High risk of bias	<b>Comment:</b> Non-randomised pre-post with control study design
<i>Performance bias.</i>		
<b>Blinding of participants and personnel</b> All outcomes	High risk of bias	<b>Comment:</b> Blinding of participants and intervention providers not possible
<i>Detection bias.</i>		
<b>Blinding of outcome assessment</b> All outcomes	High risk of bias	<b>Comment:</b> Outcome assessment was by self-complete questionnaire
<i>Attrition bias.</i>		
<b>Incomplete outcome data</b> All outcomes	High risk of bias	<b>Comment:</b> 2 dropouts from the intervention which were not accounted for.
<i>Reporting bias.</i>		
<b>Selective reporting.</b>	Uncertain risk of bias	<b>Comment:</b> No protocol mentioned.



Type of bias	Review authors' judgement	Support for judgement
<i>Selection bias.</i>		
<b>Random sequence generation.</b>	High risk of bias	<b>Quote:</b> 'The study was not randomized for logistic reasons'.
<b>Allocation concealment.</b>	High risk of bias	<b>Quote:</b> 'The study was not randomized for logistic reasons'.
<i>Performance bias.</i>		
<b>Blinding of participants and personnel</b> All outcomes	High risk of bias	<b>Comment:</b> Blinding of participants and intervention providers not possible
<i>Detection bias.</i>		
<b>Blinding of outcome assessment</b> All outcomes	High risk of bias	<b>Comment:</b> Outcome assessment was by self-complete questionnaire
<i>Attrition bias.</i>		
<b>Incomplete outcome data</b> All outcomes	Uncertain risk of bias	<b>Quote:</b> 'All 108 medical students provided written consent before enrolment in the investigation...Surveys were completed by all students at the beginning and by 104 students (52 in each group) at the midway point. The 4 who did not complete the survey were on temporary leave of absence or were ill and did not attend the clinic'.
<i>Reporting bias.</i>		
<b>Selective reporting.</b>	Uncertain risk of bias	<b>Comment:</b> No protocol mentioned.

11. Shera and Delva-Tauiiili, 1996

Type of bias	Review authors' judgement	Support for judgement
<i>Selection bias.</i>		
<b>Random sequence generation.</b>	High risk of bias	<b>Quote:</b> 'subjects were not randomly selected from a larger population nor randomly assigned to treatment and comparison conditions'.
<b>Allocation concealment.</b>	High risk of bias	<b>Quote:</b> 'subjects were not randomly selected from a larger population nor randomly assigned to treatment and comparison conditions'.
<i>Performance bias.</i>		
<b>Blinding of participants and personnel</b> All outcomes	High risk of bias	<b>Comment:</b> Blinding of participants and intervention providers not possible
<i>Detection bias.</i>		
<b>Blinding of outcome assessment</b> All outcomes	High risk of bias	<b>Comment:</b> Outcome assessment was by self-complete questionnaire
<i>Attrition bias.</i>		
<b>Incomplete outcome data</b> All outcomes	High risk of bias	<b>Quote:</b> 'Two respondents in each of the treatment groups were not included in the analysis because the instrument was not completed appropriately'.
<i>Reporting bias.</i>		
<b>Selective reporting.</b>	Uncertain risk of bias	<b>Comment:</b> No protocol mentioned.

Type of bias	Review authors' judgement	Support for judgement
<i>Selection bias.</i>		
<b>Random sequence generation.</b>	High risk of bias	<b>Quote:</b> 'The study was a non-randomised controlled trial with three conditions'.
<b>Allocation concealment.</b>	High risk of bias	<b>Quote:</b> 'The study was not randomised as students were allocated to firms by the medical school Registrar and this determined whether or not they would be given the intervention since certain clusters of firms had space in their two week introductory session timetable whereas others did not.'
<i>Performance bias.</i>		
<b>Blinding of participants and personnel</b> All outcomes	Uncertain risk of bias	<b>Quote1:</b> 'Allocation into the trial conditions was done by an administrator at the medical school blind to the proposed intervention and independent from the research team'. <b>Quote2:</b> 'Each trial condition consisted of clusters of firms which were put together pseudo-randomly by the office of the registrar'. <b>Comment:</b> Personnel may have been blinded but participants were not.
<i>Detection bias.</i>		
<b>Blinding of outcome assessment</b> All outcomes	High risk of bias	<b>Comment:</b> Outcome assessment was by self-complete questionnaire
<i>Attrition bias.</i>		
<b>Incomplete outcome data</b> All outcomes	High risk of bias	<b>Quote:</b> 'Of the 408 eligible medical students, 211 students responded (52% response rate). However data from 23 were not used because there were more than 20% of items missing at baseline and 17 had completed baseline instruments online after the intervention had taken place as the online deadline had passed for baseline data collection'.
<i>Reporting bias.</i>		
<b>Selective reporting.</b>	Uncertain risk of bias	<b>Comment:</b> No protocol mentioned.

Type of bias	Review authors' judgement	Support for judgement
<i>Selection bias.</i>		
<b>Random sequence generation.</b>	High risk of bias	<b>Quote:</b> 'Participants were allocated to one of 3 experimental groups and 12 different IAT versions by systematic variation'.
<b>Allocation concealment.</b>	High risk of bias	<b>Quote:</b> 'Participants were allocated to one of 3 experimental groups and 12 different IAT versions by systematic variation'
<i>Performance bias.</i>		
<b>Blinding of participants and personnel</b> All outcomes	Uncertain risk of bias	<b>Quote:</b> 'Participants were told that the experiment was being carried out to test the influence of information processing in knowledge transfer of psychological disorders.'
<i>Detection bias.</i>		
<b>Blinding of outcome assessment</b> All outcomes	High risk of bias	<b>Comment:</b> Outcome assessment was by self-complete questionnaire
<i>Attrition bias.</i>		
<b>Incomplete outcome data</b> All outcomes	High risk of bias	<b>Quote:</b> 'Three participants in the BG condition and 2 participants from the PS condition were excluded because they could not recall at least 2 relevant causal facts from either the text or the film or both'.
<i>Reporting bias.</i>		
<b>Selective reporting.</b>	Uncertain risk of bias	<b>Comment:</b> No protocol mentioned.

14. Kerby et al. 2008

Type of bias	Review authors' judgement	Support for judgement
<i>Selection bias.</i>		
<b>Random sequence generation.</b>	Uncertain risk of bias	<b>Quote:</b> 'they were randomly allocated using a concealed randomisation method'
<b>Allocation concealment.</b>	Low risk of bias	<b>Quote:</b> 'they were randomly allocated using a concealed randomisation method'
<i>Performance bias.</i>		
<b>Blinding of participants and personnel</b> All outcomes	High risk of bias	<b>Comment:</b> Blinding of participants and personnel was not possible.
<i>Detection bias.</i>		
<b>Blinding of outcome assessment</b> All outcomes	Uncertain risk of bias	<b>Quote:</b> 'Statistical analyses were undertaken by an independent researcher masked to allocation status and all participants were asked not to reveal their group allocation'. <b>Comment:</b> assessment was by self-report questionnaire
<i>Attrition bias.</i>		
<b>Incomplete outcome data</b> All outcomes	Uncertain risk of bias	<b>Comment:</b> 5 participants were lost to follow-up however the reasons were not given.
<i>Reporting bias.</i>		
<b>Selective reporting.</b>	Uncertain risk of bias	<b>Comment:</b> No protocol mentioned.

15. Dearing and Steadman, 2008

Type of bias	Review authors' judgement	Support for judgement
<i>Selection bias.</i>		
<b>Random sequence generation.</b>	High risk of bias	<b>Comment:</b> no randomisation method described. <b>Quote:</b> 'The participants were divided into experimental and control groups according to the participant's clinical site and rotation'.
<b>Allocation concealment.</b>	High risk of bias	<b>Comment:</b> no allocation concealment method described. <b>Quote:</b> 'The participants were divided into experimental and control groups according to the participant's clinical site and rotation'.
<i>Performance bias.</i>		
<b>Blinding of participants and personnel</b> All outcomes	High risk of bias	<b>Comment:</b> Blinding of participants and intervention providers not possible
<i>Detection bias.</i>		
<b>Blinding of outcome assessment</b> All outcomes	High risk of bias	<b>Comment:</b> Outcome assessment was by self-complete questionnaire
<i>Attrition bias.</i>		
<b>Incomplete outcome data</b> All outcomes	High risk of bias	<b>Quote:</b> 'There were several areas of missing data for two demographic and MCRS forms'.
<i>Reporting bias.</i>		
<b>Selective reporting.</b>	Uncertain risk of bias	<b>Comment:</b> No protocol mentioned.

16. Altindag, et al., 2006

Type of bias	Review authors' judgement	Support for judgement
<i>Selection bias.</i>		
<b>Random sequence generation.</b>	High risk of bias	<b>Comment:</b> no randomisation method described
<b>Allocation concealment.</b>	High risk of bias	<b>Comment:</b> no allocation concealment method described
<i>Performance bias.</i>		
<b>Blinding of participants and personnel</b> All outcomes	High risk of bias	<b>Comment:</b> Blinding of participants and intervention providers not possible
<i>Detection bias.</i>		
<b>Blinding of outcome assessment</b> All outcomes	High risk of bias	<b>Comment:</b> Outcome assessment was by self-complete questionnaire
<i>Attrition bias.</i>		
<b>Incomplete outcome data</b> All outcomes	High risk of bias	<b>Quote:</b> The study group 'Of 32 first-year university students, 25 agreed to participate and completed all measures (response rate 78%)'. The control group 'Of 45 first-year university students, 35 agreed to participate and completed all measures (response rate 77%)'.
<i>Reporting bias.</i>		
<b>Selective reporting.</b>	Uncertain risk of bias	<b>Comment:</b> No protocol mentioned.

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## Appendix 4: Clips incorporated in the DVD intervention and their sources

Clip	Source
<b>Scene 1</b> Introduction by Professor Graham Thornicroft, consultant psychiatrist working in a mental health team in south London and also professor of community psychiatry at Institute of Psychiatry which is part of King's College London	'Combating stigma' DVD a collaboration by 'Rethink' and King's College London, Institute of Psychiatry
<b>Scene 2</b> Jacob Ramsey personal account of stigma	'Step Up on Second' a non-profit organisation in Santa Monica, California that provides housing and additional services to individuals with mental disorders. Accessible at: <a href="https://www.youtube.com/watch?v=F2r8aXyCO5Q">https://www.youtube.com/watch?v=F2r8aXyCO5Q</a>
<b>Scene 3</b> Arabic audio scenario clip of a stigmatised arranged marriage proposal of a man suffering from a mental illness	Palestinian Ministry of Health in association with the world health organisation. Accessible at: <a href="https://www.youtube.com/watch?v=tBxH5IZPBeA">https://www.youtube.com/watch?v=tBxH5IZPBeA</a>
<b>Scene 4</b> Personal accounts of mental illness and stigma, by Patricia, Silvia and Mark.	Accessible at: <a href="https://www.youtube.com/watch?v=AHwonNVeNzo">https://www.youtube.com/watch?v=AHwonNVeNzo</a>
<b>Scene 5</b> Arabic audio scenario clip depicting stigma at the workplace towards an individual with a history of a mental illness	Palestinian Ministry of Health in association with the world health organisation. Accessible at:
<b>Scene 6</b> Personal accounts of mental illness and employment, by Patricia, Silvia and Mark.	Accessible at: <a href="https://www.youtube.com/watch?v=AHwonNVeNzo">https://www.youtube.com/watch?v=AHwonNVeNzo</a>
<b>Scene 7</b> Staged clip noting how stigma in mental illness impacts employment decisions.	Accessible at: <a href="https://www.youtube.com/watch?v=Dw_I-G1smoo">https://www.youtube.com/watch?v=Dw_I-G1smoo</a>
<b>Scene 8</b> Personal accounts of mental illness and media portrayal, by Patricia and Mark.	Accessible at: <a href="https://www.youtube.com/watch?v=AHwonNVeNzo">https://www.youtube.com/watch?v=AHwonNVeNzo</a>
<b>Scene 9</b>	

Clip	Source
Personal account of mental illness by Yvonne Stuart Williams, Stevie White McQuillan and Kate Hackney	Accessible at: <a href="https://www.youtube.com/watch?v=YxT1y2KoAvQ">https://www.youtube.com/watch?v=YxT1y2KoAvQ</a>
<b>Scene 10</b> First person account of mental illness by a previous service user, Jane.	‘Combating stigma’ DVD a collaboration by ‘Rethink’ and King’s College London, Institute of Psychiatry
<b>Scene 11</b> A personal account of depression by Nina, and her mother’s (Anal) perspective	‘Time to Change’ a British national campaign led by ‘Rethink’ and ‘Mind’ leading mental health charity organisations in the UK. Accessible at:
<b>Scene 12</b> Personal account of mental illness by previous service users, James and Jane.	‘Combating stigma’ DVD a collaboration by ‘Rethink’ and King’s College London, Institute of Psychiatry
<b>Scene 13</b> Mental illness and recovery, as explained by Professor Graham Thornicroft.	‘Combating stigma’ DVD a collaboration by ‘Rethink’ and King’s College London, Institute of Psychiatry
<b>Scene 14</b> Personal account of mental illness by previous service users, James and Jane.	‘Combating stigma’ DVD a collaboration by ‘Rethink’ and King’s College London, Institute of Psychiatry
<b>Scene 15</b> Arabic clip of first person speaker detailing her journey with mental illness	Palestinian Ministry of Health in association with the world health organisation. Accessible at: <a href="https://www.youtube.com/watch?v=tH-plQ1e1yY">https://www.youtube.com/watch?v=tH-plQ1e1yY</a>
<b>Scene 16</b> Arabic audio scenario clip of folk medicine and witchcraft being used to treat an individual with a mental illness.	Palestinian Ministry of Health in association with the world health organisation. Accessible at: <a href="https://www.youtube.com/watch?v=GLUz5Kbw6L8">https://www.youtube.com/watch?v=GLUz5Kbw6L8</a>
<b>Scene 17</b> First person speakers detail their experiences.	‘Time to Change’ a British national campaign led by ‘Rethink’ and ‘Mind’ leading mental health charity organisations in the UK. Accessible at: <a href="https://www.youtube.com/watch?v=Vo2ie5eJ0ag">https://www.youtube.com/watch?v=Vo2ie5eJ0ag</a>
<b>Scene 18</b> Arabic audio scenario clip of two personal statements of a young man (Ahmad) and a teenager (Noor) with mental illness	Palestinian Ministry of Health in association with the world health organisation. Accessible at:
<b>Scene 19</b> Conclusion by Professor Graham Thornicroft.	

Clip	Source
	'Combating stigma' DVD a collaboration by 'Rethink' and King's College London, Institute of Psychiatry

## Appendix 5: First aide memoire for DVD intervention

Scene	Summary	Intended key messages
<p><b>Scene 1</b> Introduction by Professor Graham Thornicroft, consultant psychiatrist working in a mental health team in south London and also professor of community psychiatry at Institute of Psychiatry which is part of King's College London</p>	<p>In this clip Professor Graham Thornicroft introduces the film and provides an overview of the overall aim and content while providing a brief background into his interest in stigma research.</p>	<p>Personal testimonies of stigma and discrimination as well as coping and recovery from the perspective of individuals who suffer from a mental illness and their careers can be touching and enlighteningly educational.</p>



Scene	Summary	Intended key messages
<p><b>Scene 2</b> by Jacob Ramsey A first hand experience of stigma</p>	<p>This clip describes the additional burden that the mentally ill and their careers suffer from which is stigma. The service user defines stigma and explains what it means to have a mental illness and how to educate those who stigmatise. He also lists the harmful consequences that stigma can have on those who suffer from a mental illness.</p>	<p>Stigma can be equally burdening to the service user and his/her career as the symptoms of the mental illness itself.</p> <p>Corrections of misconceptions of those who stigmatise and label can occur firstly by introducing the Bio-medical model which supports the notion that mental illness is a disease as any other physical illness and is treatable. It can inflict anyone and therefore the person should not be blamed for it.</p> <p>Secondly, by educating them about mental illness and applying the social model approach, you can bridge the gap between ‘them’ and ‘us’. One way of achieving this is by providing examples of famous people of our time who suffered from an episode of mental illness, which helps them acknowledge that they too may be susceptible to a mental illness in the future.</p> <p>The harmful consequences of stigma include but are not limited to, making the person feel isolated and ashamed, avoid seeking treatment, become victims of violence.</p> <p>Positive note, stigma elimination is possible if we all work together to tackle it</p>
<p><b>Scene 3</b> Arabic audio scenario clip of a stigmatised arranged marriage proposal of a man suffering from a mental illness</p>	<p>In this clip the prospective groom’s parents approach the prospective bride’s parents and ask for her hand in marriage for their son. Things seem hopeful at first until the bride’s parents ask around and find out that the prospective groom suffers from a mental illness.</p>	<p>The mentally ill individual is not crazy he/she is a human being worthy of marriage, with equal rights to receive care, work and protection.</p>

Scene	Summary	Intended key messages
<p><b>Scene 4</b> Personal accounts of mental illness and stigma, by Patricia, Silvia and Mark.</p>	<p>The clip shows four suffers of mental illness giving their accounts of stigma which they have experienced, as well as showing shocking discriminatory headlines that typify the presentation of mental illness. An overview is presented followed by further details from the first hand speakers.</p>	<p>Being diagnosed with a mental illness subsequently leads to being stigmatized and discriminated against, the effects of which can be devastating to the morale of the individual (leaving them feeling shunned or rejected) already suffering from a traumatizing illness.</p> <p>Stigma from bouts of illness can be life long, and lead to worsened symptomatology.</p> <p>One episode of illness or hospitalisation is not understood by the sufferer's social circle. This results in losing friends, even long term friends those who are close.</p> <p>People are afraid of those with mental illness. The media depicts mental illness in a negative way.</p> <p>Stigma prevents a large number of people from telling others they are suffering from a mental illness.</p>
<p><b>Scene 5</b> Arabic audio scenario clip depicting stigma at the workplace towards an individual with a history of a mental illness</p>	<p>The clip is set in the employer's office where the employer and his friend are talking when an employee walks in. The employer's friend recognizes the employee and greets him. When the employee steps out of the office the employer's friend praises the employee to the employer stating that he has come a long way with his mental illness and all. The employer who was unaware of the fact that the employee had suffered from a mental illness picks up the phone and calls the finance department to terminate the employee, stating he doesn't need a crazy employee.</p>	<p>Suffering from a mental illness is a lifelong stigma.</p> <p>Even after recovering fully from a mental illness, stigma can hinder the chances for an individual to maintain a respectable job.</p> <p>An individual who suffers or has suffered from a mental illness faces the dilemma of whether or not they should conceal their history of a mental illness or reveal it to their employer risking their position.</p>

Scene	Summary	Intended key messages
<p><b>Scene 6</b> Personal accounts of mental illness and employment, by Patricia, Silvia and Mark.</p>	<p>The clip features three previous speakers talking about their experiences and concerns in relation to stigma in the workplace.</p>	<p>Unemployment is higher for those with mental illness than among those with disabilities.</p> <p>Dismissal from work can take place due to stigma in the workplace despite it's illegality. This stigma also has an impact on promotions, where there are a lack of those with mental illness being trusted with higher level positions. These issues lead to a fear of disclosing mental illness to potential or current employers.</p>
<p><b>Scene 7</b> Staged clip noting how stigma in mental illness impacts employment decisions.</p>	<p>The clip is staged to show what seems to be an interview between an employer and candidate, followed by a second candidate. The first candidate discloses that they have suffered from a mental illness, while the second discloses that they have diabetes. Additional informative text is provided.</p>	<p>Employers may disregard applications from those with mental illness, even if they are more suitably qualified.</p> <p>Mental illness is more stigmatised than perhaps disorders such as diabetes.</p> <p>There is often a negative employer stance in relation to mental illness and key decision makers often believe sufferers are not stable enough to employ them.</p> <p>There is a belief that mental illness sufferers are capable of extreme violence, however, violence is not more prevalent among those with mental illness than in the general population.</p> <p>Mental illness is common, affecting 1 in 4 people.</p>
<p><b>Scene 8</b> Personal accounts of mental illness and media portrayal, by Patricia and Mark.</p>	<p>The clip details first hand reports of negative and one-sided media portrayal of mental illness. The clip includes factual text, and newspaper articles used to illustrate narrative</p>	<p>The majority of those suffering from mental illness blame media portrayal for the stigma they experience.</p> <p>Mental illness is negatively reported, leading to stigma by the general public. While violent stories are often reported, there is a lack of positive stories to counteract, leading to skewed public perception.</p>

Scene	Summary	Intended key messages
<p><b>Scene 9</b> Personal account of mental illness by Yvonne Stuart Williams, Stevie White McQuillan and Kate Hackney</p>	<p>A clip giving detailed first person accounts of living with schizophrenia. The clip includes information on symptoms, stigma, the media and the disorder's impact on friendships.</p>	<p>Symptoms in periods of illness are briefly detailed, including hallucinations, delusions, confusion and changes in mood.</p> <p>Symptoms are not always present and periods of illness are treatable with medication, leading to a reduction of symptoms.</p> <p>1 in 4 people suffer from mental health issues.</p> <p>Others are not generally supportive of people suffering from mental illness, some scolding and taunting. This comes at a time when support is needed, and leads to a devastating feeling of abandonment and fear.</p> <p>The support of others including friends, partners and family members can positively contribute to coping. Being included by friends and in normal social experiences is of definite benefit.</p> <p>Being diagnosed with a mental illness is a frightening experience. In addition, that fear is also evident from others around the sufferer, including friends.</p> <p>Education regarding mental illness is important and fear is not the solution.</p> <p>Suffers of schizophrenia are more likely to be victims of violence, or hurt themselves, than be violent towards others.</p>

Scene	Summary	Intended key messages
<p><b>Scene 10</b> First person account of mental illness by a previous service user, Jane.</p>	<p>The clip provides a personal account from someone who was repeatedly sectioned, who then made a full recovery and has been symptom and treatment free for over 13 years. The speaker also became a psychotherapist as a result of her experiences of mental illness.</p>	<p>Being sectioned can be a confusing and traumatic experience. The lack of control in the situation is frightening and often sectioning can occur when the person is doing well. Being hospitalised can lead to increased symptoms, medications and it may be several months before the service user actually recovers from the cycle.</p> <p>With the right support, sufferers of mental illness can make a full recovery. However, even though this is the case, stigma within the mental health system means that key workers do not recognise this.</p> <p>Medication should not be the only solution. Talking with someone and exploring the symptoms can help recovery. In addition, continuity of care (e.g. seeing the same psychiatrist) can also be beneficial.</p>
<p><b>Scene 11</b> A personal account of depression by Nina, and her mother's (Anal) perspective</p>	<p>A clip detailing a depression sufferer's account of depression in relation to support from family members, alongside the mother's perspective on her daughter's diagnosis.</p>	<p>There are definite benefits of family support from parents and siblings.</p> <p>There doesn't have to be a family history of mental illness for it to occur.</p> <p>People with mental illness may take time to speak to someone about the way they feel. However, talking is important as an outlet for someone experiencing illness.</p> <p>There are cultural issues surrounding mental illness including embarrassment and shame, particularly when social engagements are missed.</p>

Scene	Summary	Intended key messages
<p><b>Scene 12</b> Personal account of mental illness by previous service users, James and Jane.</p>	<p>This clip gives first person accounts of illness in terms of negative media portrayal and its contribution to stigma.</p>	<p>Schizophrenia is misrepresented in the media, and linked with extreme violence such as murder. However only 5% of murders are associated with people suffering from mental illness.</p> <p>When the mentally ill are involved in crimes however, then analysis usually finds a lack of care support or dangerous substances are involved.</p> <p>Mentally ill people are far more likely to be victims of crime than perpetrators.</p> <p>Often people with mental illness do not report crimes against them because their evidence can be easily dismissed on the grounds of their disorder.</p> <p>Media is involved in creating negative stereotypes of mental illness and there is a need for this to be addressed</p>
<p><b>Scene 13</b> Mental illness and recovery, as explained by Professor Graham Thornicroft.</p>	<p>The clip details recovery rates in mental illness and in particular schizophrenia, one of the more debilitating mental disorders.</p>	<p>Despite public misconceptions, approximately half of people with schizophrenia make a full recovery. In addition a further quarter, will recover to some extent.</p>

Scene	Summary	Intended key messages
<p><b>Scene 14</b> Personal account of mental illness by previous service users, James and Jane.</p>	<p>This clip gives first person accounts of illness and prognosis in terms of full recovery and partial recovery.</p>	<p>Service users are surrounded by negative beliefs about prognosis, and as a result can believe it is inevitable that they will need to live in supported housing, have issues with employment and relationships. This can become a self-fulfilling prophecy.</p> <p>Managing, coping and surviving are all negative terms regularly used, and limit the service user.</p> <p>1 in 100 people are diagnosed, and 20% make a full recovery, although this is not widely known.</p> <p>Recovery needs to be noted as a possible outcome. If healthcare professionals explain that illness does not have to be life long, this will give service users a much better prognosis.</p> <p>There should be more communication between service users and health care professionals in the psychiatric system. Stigma means that service users' opinions do not seem to be valid and this is harmful to the service user, rather than aiding recovery.</p>

Scene	Summary	Intended key messages
<p><b>Scene 15</b> Arabic clip of first person speaker detailing her journey with mental illness</p>	<p>A lady talks about her experiences with mental illness. She explains when it began, how it affected her mood and studies, how people reacted negatively towards her and underestimated her abilities.</p> <p>She then talks about her psychologist who was encouraging and supportive and helped her get through difficult times. She switches to a positive note about herself and how she managed to live a normal life, succeed in her studies and what she hopes to achieve in the future.</p> <p>Finally, she advises others about the importance of not being embarrassed or scared to seek professional help from a mental health center, psychologist or psychiatrist at the first signs of a mental illness.</p>	<p>Having a mental illness can be devastating but with the right kind of help from supportive mental health professionals one can learn to adapt and live a normal life.</p> <p>Having a mental illness is not the end of the world. There is hope for the mentally ill. They too just like any other normal human being can progress academically and achieve a brighter future.</p> <p>The key to tackling a mental illness is seeking help as soon possible by visiting a mental health center, psychiatrist, or psychologist.</p>
<p><b>Scene 16</b> Arabic audio scenario clip of folk medicine and witchcraft being used to treat an individual with a mental illness.</p>	<p>A friend takes a frightened and hesitant father and his son to see a witchdoctor to seek treatment for his mentally ill son. Moments after the witchdoctor takes the son for treatment you hear background screams from the boy as he yells for him to stop.</p>	<p>Public education on mental illness is crucial.</p> <p>Ignorance about what mental illness is and how it can be treated can make people revert to all sorts of superstitious acts and/or witchcraft folk medicine, which may pose, harmful to the individual suffering from the mental illness.</p> <p>Moreover, such practices may delay medical treatment seeking leading to an escalation and worsening of the condition itself.</p>



Scene	Summary	Intended key messages
<p><b>Scene 17</b> First person speakers detail their experiences.</p>	<p>A range of people, including well known celebrities, talk about their experiences with mental illness. The clip mentions a number of disorders as well as feelings, myths about violence and social rejection</p>	<p>Having a mental illness is a distressing experience, but the person is much more than just their illness.</p> <p>There are a number of mental health issues such as depression, schizophrenia, anorexia, borderline personality disorder or self-harming. However, this does not mean that the person cannot live a full life, and many people with mental illness have achieved great things.</p> <p>Derogatory labels are commonly used, and people suffering from mental illness experience a lot of verbal abuse, physical abuse and rejection, from neighbours and even friends.</p> <p>It is a myth that people with mental illness are more violent than the general population.</p> <p>Suicide is the biggest killer of males under 40.</p>
<p><b>Scene 18</b> Arabic audio scenario clip of two personal statements of a young man (Ahmad) and a teenager (Noor) with mental illness</p>	<p>The narrator in the clip introduces each of the individuals. The individuals explain that they suffer from a mental illness but are normal human beings and are not crazy. The narrator then recaps on essential points about mental illness and corrects misconceptions about violence, treatment and recovery.</p>	<p>The mentally ill are normal human beings who have fears, dreams and feelings just like everybody else. They deserve to be accepted and treated not shunned and stigmatised.</p> <p>Mental illness is just like any other illness anyone can be subjected to it. However, it has causes and once known treatments can be initiated.</p>

## Appendix 6: Second aide memoire for DVD intervention

Florence Nightingale School of Nursing &  
Midwifery, King's College London



### FILM AIDE MEMOIRE WITH ANALYSIS QUESTIONS

#### Welcome and Introduction

Welcome. My name is Loujain Sharif and I am a PhD student from King's College London conducting research on educational training in Nursing and Mental Illness. I would like to thank you for agreeing to take part in my project by providing me with your invaluable feedback on the educational film intervention you are about to watch. I am interested in your views (as professionals in mental healthcare) on the educational film intervention you received. In addition, I hope to learn what you felt were the key messages, implicit and explicit nonverbal content, strengths and weaknesses of this material in order to improve future delivery. Your feedback will be confidential and used for research purposes only to help modify and improve the intervention. I would appreciate it if you can answer as openly and honestly as possible. Thank you for your time.

### Film Aide Memoire

Dear viewer while watching the film please fill in the film aide memoire (table-1 located below) for scene by scene key messages while noting down remarks on implicit and explicit nonverbal content. For a translation of the Arabic scenes please refer to the film manuscript also attached in this email. Thank you.

**Table 1: FILM AIDE MEMOIRE**

Scene	Summary	Key messages
<b><i>Prologue and Scene 1 Introduction</i></b> by Professor Graham Thornicroft, consultant psychiatrist working in a mental health team in south London and also professor of community psychiatry at Institute of Psychiatry which is part of King's College London	In this clip Professor Graham Thornicroft introduces the film and provides an overview of the overall aim and content while providing a brief background into his interest in stigma research.	
<b><i>Scene 2</i></b> by Jacob Ramsey A first hand experience of stigma	This clip describes the additional burden that the mentally ill and their careers suffer from which is stigma. The service user defines stigma and explains what it means to have a mental illness and how to educate those who stigmatise. He also lists the harmful consequences that stigma can have on those who suffer from a mental illness.	

Scene	Summary	Key messages
<p><b>Scene 3</b> Arabic audio scenario clip of a stigmatised arranged marriage proposal of a man suffering from a mental illness</p>	<p>In this clip the prospective groom's parents approach the prospective bride's parents and ask for her hand in marriage for their son. Things seem hopeful at first until the bride's parents ask around and find out that the prospective groom suffers from a mental illness.</p>	
<p><b>Scene 4</b> Personal accounts of mental illness and stigma, by Patricia, Silvie, Mark and Lydia.</p>	<p>The clip shows four sufferers of mental illness giving their accounts of stigma which they have experienced, as well as showing shocking discriminatory headlines that typify the presentation of mental illness. An overview is presented followed by further details from the first hand speakers.</p>	
<p><b>Scene 5</b> Arabic audio scenario clip depicting stigma at the workplace towards an individual with a history of a mental illness</p>	<p>The clip is set in the employer's office where the employer and his friend are talking when an employee walks in. The employer's friend recognizes the employee and greets him. When the employee steps out of the office the employer's friend praises the employee to the employer stating that he has come a long way with his mental illness and all. The employer who was unaware of the fact that the employee had suffered from a mental illness picks up the phone and calls the finance department to terminate the employee, stating he doesn't need a crazy employee.</p>	

Scene	Summary	Key messages
<b>Scene 6</b> Personal accounts of mental illness and employment, by Patricia, Silvia and Mark.	The clip features three previous speakers talking about their experiences and concerns in relation to stigma in the workplace.	
<b>Scene 7</b> Staged clip noting how stigma in mental illness impacts employment decisions.	The clip is staged to show what seems to be an interview between an employer and candidate, followed by a second candidate. The first candidate discloses that they have suffered from a mental illness, while the second discloses that they have diabetes. Additional informative text is provided.	
<b>Scene 8</b> Personal accounts of mental illness and media portrayal, by Patricia and Mark.	The clip details first hand reports of negative and one-sided media portrayal of mental illness. The clip includes factual text, and newspaper articles used to illustrate narrative	
<b>Scene 9</b> Personal account of mental illness by Yvonne Stuart Williams, Stevie White McQuillan and Kate Hackney	A clip giving detailed first person accounts of living with schizophrenia. The clip includes information on symptoms, stigma, the media and the disorder's impact on friendships.	
<b>Scene 10</b> First person account of mental illness by a previous service user, Jane.	The clip provides a personal account from someone who was repeatedly sectioned, who then made a full recovery and has been symptom and treatment free for over 13 years. The speaker also became a psychotherapist as a result of her experiences of mental illness.	

Scene	Summary	Key messages
<p><b>Scene 11</b></p> <p>A personal account of depression by Nina, and her mother's perspective</p>	<p>A clip detailing a depression sufferer's account of depression in relation to support from family members, alongside the mother's perspective on her daughter's diagnosis.</p>	
<p><b>Scene 12</b></p> <p>Personal account of mental illness by previous service users, James and Jane.</p>	<p>This clip gives first person accounts of illness in terms of negative media portrayal and its contribution to stigma.</p>	
<p><b>Scene 13</b></p> <p>Mental illness and recovery, as explained by Professor Graham Thornicroft.</p>	<p>The clip details recovery rates in mental illness and in particular schizophrenia, one of the more debilitating mental disorders.</p>	
<p><b>Scene 14</b></p> <p>Personal account of mental illness by previous service users, James and Jane.</p>	<p>This clip gives first person accounts of illness and prognosis in terms of full recovery and partial recovery.</p>	

Scene	Summary	Key messages
<p><b>Scene 15</b> Arabic clip of first person speaker detailing her journey with mental illness</p>	<p>A lady talks about her experiences with mental illness. She explains when it began, how it affected her mood and studies, how people reacted negatively towards her and underestimated her abilities.</p> <p>She then talks about her psychologist who was encouraging and supportive and helped her get through difficult times. She switches to a positive note about herself and how she managed to live a normal life, succeeds in her studies and what she hopes to achieve in the future. Finally, she advises others about the importance of not being embarrassed or scared to seek professional help from a mental health centre, psychologist or psychiatrist at the first signs of a mental illness.</p>	
<p><b>Scene 16</b> Arabic audio scenario clip of folk medicine and witchcraft being used to treat an individual with a mental illness.</p>	<p>A friend takes a frightened and hesitant father and his son to see a witchdoctor to seek treatment for his mentally ill son. Moments after the witchdoctor takes the son for treatment you hear background screams from the boy as he yells for him to stop.</p>	
<p><b>Scene 17</b> First person speakers detail their experiences.</p>	<p>A range of people, including well known celebrities, talk about their experiences with mental illness. The clip mentions a number of disorders as well as feelings, myths about violence and social rejection.</p>	

Scene	Summary	Key messages
<b>Scene 18</b> Arabic audio scenario clip of two personal statements of a young man (Ahmad) and a teenager (Noor) with mental illness	The narrator in the clip introduces each of the individuals. The individuals explain that they suffer from a mental illness but are normal human beings and are not crazy. The narrator then recaps on essential points about mental illness and corrects misconceptions about violence, treatment and recovery.	
<b>Scene 19</b> Conclusion by Professor Graham Thornicroft. And Closing remarks.	The clip provides a closing narrative for the video and reiterates some of the key points regarding how to make a positive impact in the lives of sufferers.	

### Feedback

Thank you for taking the time to watch this educational film. I would appreciate it if you would now kindly answer the following questions about the film.

1. What in your opinion was the overall key message of this film?
2. Which scenes did you think had the greatest positive impact on your views about people with mental illness and why?
3. Were there any scenes that had a negative impact on your views about people with mental illness and why?
4. Would you recommend additional key aspects that may affect people's views on mental illness, which weren't covered in the film? If yes please mention what and why.



- 5. Did you feel the length of the film was appropriate? Yes or No.**
- 6. How would you rate the overall visual quality of the film? using a scale of 1-10 (with 1 being poor and 10 being excellent)**
- 7. How would you rate the overall voice quality of the film? using a scale of 1-10 (with 1 being terrible and 10 being excellent)**
- 8. Would you recommend this film as a teaching tool for undergraduate healthcare (nurses, medical doctors, psychologists etc...) students? Please mention why or why not.**

Thank you for your time and cooperation. Please email your responses to me at: [loujain.sharif@kcl.ac.uk](mailto:loujain.sharif@kcl.ac.uk)

## **Appendix 7: Outcome measures used at three time points in the exploratory RCT**

Study ID No. \_\_\_\_\_



**Florence Nightingale School of Nursing &  
Midwifery, King's College London**

### **T0: BASELINE QUESTIONNAIRE**

Please complete this questionnaire by putting an 'X' in the box in each row that represents your answer.

Please complete all of the questions.

Please return this questionnaire after completing it to one of the study team members.

Thank you very much for your help and participation.

**Instructions:** Please respond by putting an ‘X’ in one box only for each row and where necessary write in your answer. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

Part A: Sample Demographics	
What is your gender?	Male <input type="checkbox"/> Female <input type="checkbox"/>
How old are you?	.....
Which year of training are you in?	2 <sup>nd</sup> <input type="checkbox"/> 3 <sup>rd</sup> <input type="checkbox"/> 4 <sup>th</sup> <input type="checkbox"/>
Have you had any courses/lectures/or training related to mental illness prior to this course?	Yes <input type="checkbox"/> No <input type="checkbox"/>
What is your Nationality?	Saudi <input type="checkbox"/> Other <input type="checkbox"/> Please state .....

**Instructions:** Please respond by putting an ‘X’ in one box only for each row. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

Part B	Strongly Agree	Agree	Somewh at agree	Somewh at disagree	Disagree	Strongly disagree
1. I just learn about mental health when I have to, and would not bother reading additional material on it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. People with severe mental illness can never recover enough to have a good quality of life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Working in the mental health services field is just as highly regarded as other fields of health and social care.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. If I had a mental illness, I would never admit this to my <b>friends</b> because I would fear being treated differently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. People with severe mental illness are dangerous more often than not.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Healthcare professionals know more about the lives of people they treat with mental illness compared to their carers (family members or friends of people with mental illness).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Instructions:** Please respond by putting an 'X' in one box only for each row. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

Part B	Strongly Agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
7. If I had a mental illness, I would never admit this to my <b>colleagues</b> for fear of being treated differently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Being a healthcare professional in the area of mental health is not like being a real healthcare professional.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. If a senior colleague instructed me to treat people with mental illness in a degrading manner, I would <b>not</b> follow their instructions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I feel as comfortable talking to a person with mental illness as I do talking to a person with physical illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. It is important that any healthcare professional supporting a person with mental illness assesses the physical health of the person with mental illness or ensures this is done.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. The public does <b>not</b> need to be protected from people with severe mental illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Instructions:** Please respond by putting an ‘X’ in one box only for each row. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

Part B	Strongly Agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
13. General doctors should <b>not</b> be expected to complete a thorough assessment for people with psychiatric symptoms because they can be referred to a psychiatrist.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. If a person with a mental illness complained of physical symptoms (such as chest pain) I would associate it to their mental illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I would use the term ‘crazy’, ‘majnoon’ ( <i>Arabic word for crazy</i> ) ‘nutter’, ‘mad’ etc. to describe people with mental illness that I have seen on the ward, to colleagues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. If my colleague told me they had a mental illness, I would still want to work with them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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<sup>1</sup> Mental Illness: Clinicians’ Attitudes Scale MICA-2 © 2010. Health Service and Population Research Department, Institute of Psychiatry, King’s College London. We would like to thank Aliya Kassam for her major contribution to the development of this scale. Contact: Professor Graham Thornicroft. Email: [graham.thornicroft@kcl.ac.uk](mailto:graham.thornicroft@kcl.ac.uk)

Kassam A., Glozier N., Leese M., Henderson C., Thornicroft G. (2010) Development and responsiveness of a scale to measure clinicians’ attitudes to people with mental illness (medical student version). *Acta Psychiatrica Scandinavica* 122(2), 153-161

**Instructions:** Please respond by putting an ‘X’ in one box only for each row. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

Part C	True	False
1. People with severe mental illness can fully recover.	<input type="checkbox"/>	<input type="checkbox"/>
2. People with mental illness are more likely to be the victims of violence than perpetrators ( <i>doers</i> ) of violence.	<input type="checkbox"/>	<input type="checkbox"/>
3. People with schizophrenia ( <i>a type of mental illness</i> ) have a split personality.	<input type="checkbox"/>	<input type="checkbox"/>
4. The media accurately shows people with mental illness.	<input type="checkbox"/>	<input type="checkbox"/>
5. People with mental illness are fundamentally different than from other people.	<input type="checkbox"/>	<input type="checkbox"/>
6. Medications are the only treatments you need for a mental illness.	<input type="checkbox"/>	<input type="checkbox"/>
7. Children can develop serious mental illnesses.	<input type="checkbox"/>	<input type="checkbox"/>
8. At some point in their lives approximately 1 in 4 people will experience a mental illness	<input type="checkbox"/>	<input type="checkbox"/>

**Instructions:** For each of the questions below, please respond by putting an ‘X’ in one box only for each row.

Part D	Yes	No	Don't Know
1. Are you currently <b>living with</b> , or have you ever <b>lived with</b> , someone with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are you currently <b>working with</b> , or have you ever <b>worked with</b> , someone with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Do you currently have, or have you ever had, a <b>neighbour</b> with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do you currently have, or have you ever had, a <b>close friend</b> with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**Instructions:** For the statements below, please respond by putting an ‘X’ in one box only for each row.

Part D	Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree	Somewhat Disagree
5. In the future, I would be willing to <b>live with</b> someone with a mental health problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. In the future, I would be willing to <b>work with</b> someone with a mental health problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. In the future, I would be willing to <b>live nearby</b> to someone with a mental health problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. In the future, I would be willing to continue a <b>relationship with a friend</b> who developed a mental health problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**PLEASE CHECK BACK THAT YOU HAVE COMPLETED ALL QUESTIONS AND SECTIONS**

Thank you very much for completing this questionnaire.

Study ID No. \_\_\_\_\_

Florence Nightingale School of Nursing  
& Midwifery, King's College London



**T1: POST-INTERVENTION QUESTIONNAIRE**

Please complete this questionnaire by putting an 'X' in the box in each row that represents your answer.

Please complete all of the questions.

Please return this questionnaire after completing it to one of the study team members.

Thank you very much for your help and participation.

**Instructions:** Please respond by putting an ‘X’ in one box only for each row. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

Part A	Strongly Agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
1. I just learn about mental health when I have to, and would not bother reading additional material on it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. People with severe mental illness can never recover enough to have a good quality of life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Working in the mental health services field is just as highly regarded as other fields of health and social care.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. If I had a mental illness, I would never admit this to my <b>friends</b> because I would fear being treated differently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. People with severe mental illness are dangerous more often than not.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Healthcare professionals know more about the lives of people they treat with mental illness compared to their carers (family members or friends of people with mental illness).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Instructions:** Please respond by putting an ‘X’ in one box only for each row. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

Part A	Strongly Agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
7. If I had a mental illness, I would never admit this to my <b>colleagues</b> for fear of being treated differently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Being a healthcare professional in the area of mental health is not like being a real healthcare professional.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. If a senior colleague instructed me to treat people with mental illness in a degrading manner, I would <b>not</b> follow their instructions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I feel as comfortable talking to a person with mental illness as I do talking to a person with physical illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. It is important that any healthcare professional supporting a person with mental illness assesses the physical health of the person with mental illness or ensures this is done.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. The public does not need to be protected from people with severe mental illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Instructions:** Please respond by putting an ‘X’ in one box only for each row. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

Part A	Strongly Agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
13. General doctors should <b>not</b> be expected to complete a thorough assessment for people with psychiatric symptoms because they can be referred to a psychiatrist.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. If a person with a mental illness complained of physical symptoms (such as chest pain) I would associate it to their mental illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I would use the term ‘crazy’, ‘majnoon’ ( <i>Arabic word for crazy</i> ) ‘nutter’, ‘mad’ etc. to describe people with mental illness that I have seen on the ward, to colleagues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. If my colleague told me they had a mental illness, I would still want to work with them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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<sup>2</sup> Mental Illness: Clinicians’ Attitudes Scale MICA-2 © 2010. Health Service and Population Research Department, Institute of Psychiatry, King’s College London. We would like to thank Aliya Kassam for her major contribution to the development of this scale. Contact: Professor Graham Thornicroft. Email: [graham.thornicroft@kcl.ac.uk](mailto:graham.thornicroft@kcl.ac.uk)

Kassam A., Glozier N., Leese M., Henderson C., Thornicroft G. (2010) Development and responsiveness of a scale to measure clinicians’ attitudes to people with mental illness (medical student version). *Acta Psychiatrica Scandinavica* 122(2), 153-161

**Instructions:** Please respond by putting an 'X' in one box only for each row. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

Part B	True	False
1. People with severe mental illness can fully recover.	<input type="checkbox"/>	<input type="checkbox"/>
2. People with mental illness are more likely to be the victims of violence than perpetrators (doers) of violence.	<input type="checkbox"/>	<input type="checkbox"/>
3. People with schizophrenia ( <i>a type of mental illness</i> ) have a split personality.	<input type="checkbox"/>	<input type="checkbox"/>
4. The media accurately shows people with mental illness.	<input type="checkbox"/>	<input type="checkbox"/>
5. People with mental illness are fundamentally different than from other people.	<input type="checkbox"/>	<input type="checkbox"/>
6. Medications are the only treatments you need for mental illness.	<input type="checkbox"/>	<input type="checkbox"/>
7. Children can develop serious mental illnesses.	<input type="checkbox"/>	<input type="checkbox"/>
8. At some point in their lives approximately 1 in 4 people will experience a mental illness	<input type="checkbox"/>	<input type="checkbox"/>

**Instructions:** For each of the questions below, please respond by putting an 'X' in one box only for each row.

Part C	Yes	No	Don't Know
1. Are you currently <b>living with</b> , or have you ever <b>lived with</b> , someone with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are you currently <b>working with</b> , or have you ever <b>worked with</b> , someone with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Do you currently have, or have you ever had, a <b>neighbour</b> with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do you currently have, or have you ever had, a <b>close friend</b> with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Instructions:** For the statements below, please respond by putting an 'X' in one box only for each row.

Part C	Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree	Somewhat Disagree
5. In the future, I would be willing to <b>live with</b> someone with a mental health problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. In the future, I would be willing to <b>work with</b> someone with a mental health problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. In the future, I would be willing to <b>live nearby</b> to someone with a mental health problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. In the future, I would be willing to continue a <b>relationship with a friend</b> who developed a mental health problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**Instructions:** Think back to the educational session on mental health awareness that you attended. Please put an 'X' in the boxes as appropriate and write in your views or comments for the last set of questions.

Part D	Strongly agree	Agree	Disagree	Strongly disagree
The training increased my confidence in working with people with mental illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The content of the training will be useful in my overall nursing training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How **beneficial** was the lecture in your opinion?

Not at all      Not very      Moderately      Very      Extremely

What was the **best** aspect of the educational session?

.....

.....

.....

What was the **worst** aspect of the educational session?

.....

.....

.....

What material did you feel was **missing** from the educational session?

.....

.....

.....

Please tick this box to indicate that you are willing to take part in a face-to-face interview to provide further details on the study.

☐

**PLEASE CHECK BACK THAT YOU HAVE COMPLETED ALL QUESTIONS AND SECTIONS.**

Thank you very much for completing this questionnaire.

Study ID No. \_\_\_\_\_

Florence Nightingale School of Nursing  
& Midwifery, King's College London



## **T2: FOLLOW-UP QUESTIONNAIRE (T2)**

Please complete this questionnaire by putting an 'X' in the box in each row that represents your answer.

Please complete all of the questions.

Please return this questionnaire after completing it to one of the study team members.

Thank you very much for your help and participation.

**Instructions:** Please respond by putting an ‘X’ in one box only for each row. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

Part A	Strongly Agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
1. I just learn about mental health when I have to, and would not bother reading additional material on it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. People with severe mental illness can never recover enough to have a good quality of life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Working in the mental health services field is just as highly regarded as other fields of health and social care.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. If I had a mental illness, I would never admit this to my <b>friends</b> because I would fear being treated differently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. People with severe mental illness are dangerous more often than not.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Healthcare professionals know more about the lives of people they treat with mental illness compared to their carers (family members or friends of people with mental illness).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Instructions:** Please respond by putting an ‘X’ in one box only for each row. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

Part A	Strongly Agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
7. If I had a mental illness, I would never admit this to my <b>colleagues</b> for fear of being treated differently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Being a healthcare professional in the area of mental health is not like being a real healthcare professional.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. If a senior colleague instructed me to treat people with mental illness in a degrading manner, I would <b>not</b> follow their instructions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I feel as comfortable talking to a person with mental illness as I do talking to a person with a physical illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. It is important that any healthcare professional supporting a person with mental illness assesses the physical health of the person with mental illness or ensures this is done.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. The public does <b>not</b> need to be protected from people with severe mental illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Instructions:** Please respond by putting an ‘X’ in one box only for each row. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

Part A	Strongly Agree	Agree	Somewhat agree	Somewhat disagree	Disagree	Strongly disagree
<b>13.</b> General doctors should <b>not</b> be expected to complete a thorough assessment for people with psychiatric symptoms because they can be referred to a psychiatrist.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>14.</b> If a person with a mental illness complained of physical symptoms (such as chest pain) I would associate it to their mental illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>15.</b> I would use the term ‘crazy’, ‘majnoon’ ( <i>Arabic word for crazy</i> ) ‘nutter’, ‘mad’ etc. to describe people with mental illness that I have seen on the ward, to colleagues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>16.</b> If my colleague told me they had a mental illness, I would still want to work with them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3

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<sup>3</sup> Mental Illness: Clinicians’ Attitudes Scale MICA-2 © 2010. Health Service and Population Research Department, Institute of Psychiatry, King’s College London. We would like to thank Aliya Kassam for her major contribution to the development of this scale. Contact: Professor Graham Thornicroft. Email: [graham.thornicroft@kcl.ac.uk](mailto:graham.thornicroft@kcl.ac.uk)

Kassam A., Glozier N., Leese M., Henderson C., Thornicroft G. (2010) Development and responsiveness of a scale to measure clinicians’ attitudes to people with mental illness (medical student version). *Acta Psychiatrica Scandinavica* 122(2), 153-161

**Instructions:** Please respond by putting an ‘X’ in one box only for each row. Mental illness here refers to conditions for which an individual would be seen by a psychiatrist.

Part B	True	False
1. People with severe mental illness can fully recover.	<input type="checkbox"/>	<input type="checkbox"/>
2. People with mental illness are more likely to be the victims of violence than perpetrators ( <i>doers</i> ) of violence.	<input type="checkbox"/>	<input type="checkbox"/>
3. People with schizophrenia ( <i>a type of mental illness</i> ) have a split personality.	<input type="checkbox"/>	<input type="checkbox"/>
4. The media accurately shows people with mental illness.	<input type="checkbox"/>	<input type="checkbox"/>
5. People with mental illness are fundamentally different than from other people.	<input type="checkbox"/>	<input type="checkbox"/>
6. Medications are the only treatments you need for a mental illness.	<input type="checkbox"/>	<input type="checkbox"/>
7. Children can develop serious mental illnesses.	<input type="checkbox"/>	<input type="checkbox"/>
8. At some point in their lives approximately 1 in 4 people will experience a mental illness	<input type="checkbox"/>	<input type="checkbox"/>

**Instructions:** For each of the questions below, please respond by putting an ‘X’ in one box only for each row.

Part C	Yes	No	Don't Know
1. Are you currently <b>living with</b> , or have you ever <b>lived with</b> , someone with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Are you currently <b>working with</b> , or have you ever <b>worked with</b> , someone with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Do you currently have, or have you ever had, a <b>neighbour</b> with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Do you currently have, or have you ever had, a <b>close friend</b> with a mental health problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Instructions:** For the statements below, please respond by putting an ‘X’ in one box only for each row.

Part C	Strongly Agree	Agree	Somewhat Agree	Disagree	Strongly Disagree	Somewhat Disagree
5. In the future, I would be willing to <b>live with</b> someone with a mental health problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. In the future, I would be willing to <b>work with</b> someone with a mental health problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. In the future, I would be willing to <b>live nearby</b> to someone with a mental health problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. In the future, I would be willing to continue a <b>relationship with a friend</b> who developed a mental health problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**Instructions:** Think back to your clinical placement in mental health wards and rate the following statements. Please respond by putting an 'X' in one box only for each row.

Part D	Strongly Agree	Agree	Disagree	Strongly Disagree
1. Nurses in this ward told me how and why they were doing things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The ward nurses often thought of interesting learning activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Ward assignments were clear so that I knew what to do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The ward nurse working with me went out of his/her way to help me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. There were opportunities for me to proceed at my own rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The ward nurse working with me considered my feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I had a say in how the shifts were spent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Workload allocation in this ward was carefully planned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Staff were punctual ( <i>on time</i> ) for work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. The ward nurses were unfriendly and inconsiderate towards students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Instructions:** Think back to your clinical placement in mental health wards and rate the following statements. Please respond by putting an 'X' in one box only for each row.

Part D	Strongly Agree	Agree	Disagree	Strongly Disagree
11. This clinical placement was a waste of time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. This clinical placement was boring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. This was a disorganised clinical placement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. No one was interested in my problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I enjoyed coming to this ward	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. This clinical placement was interesting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I used to look forward to coming to this clinical placement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I put effort into what I did in the ward	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I paid attention to what others were saying	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. The nurse facilitator talked with me as an individual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Instructions:** Think back to the educational session on mental health awareness that you attended. Please put an 'X' in the boxes as appropriate and write in your views or comments for the last set of questions.

Part E	Strongly agree	Agree	Disagree	Strongly disagree
The training increased my confidence in working with people with mental illness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The content of the training will be useful in my overall nursing training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How **beneficial** do you view the educational training session, having now completed your clinical placement?

Not at all ☐ Not very ☐ Moderately ☐ Very ☐ Extremely ☐

What was the **best** aspect of the educational session in relation to your clinical placement?

.....

.....

.....

What was the **worst** aspect of the educational session in relation to your clinical placement?

.....

.....

.....

What material did you feel was **missing** from the educational session in relation to your clinical placement?

.....

.....

.....



Please tick this box indicating that you are willing to take part in a focus group to provide further details on the study.

☐

**PLEASE CHECK BACK THAT YOU HAVE COMPLETED ALL QUESTIONS AND SECTIONS**

Thank you very much for completing this questionnaire.

## Appendix 8: Ethical approval documentation

	<p>المملكة العربية السعودية وزارة التعليم العالي جامعة الملك عبد العزيز كلية العلوم الطبية التطبيقية</p>	
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**ETHICS AND RESEARCH  
COMMITTEE**

**To:** Mrs. Lujain Saud M. Sharif, PhD Candidate

**From:** Dr. Essam H. Jiffri, Chairman, Ethics and Research Committee

**Date:** Monday, 18 July 2011 G

**Re:** Research Proposal (Comparison of Educational Interventions to Address Stigma of Mental Illness amongst Nursing Undergraduates in Jeddah, Saudi Arabia: A Preliminary Randomised Trial)

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Dear Mrs. Lujain Sharif,

The above titled, project in fulfilment of your PhD degree in Nursing department at Florence Nightingale School of nursing and midwifery, King's College London , has been discussed in the Ethical Committee Meeting held on Saturday, 16 July 2011.

The Ethics and Research Committee has reviewed your research proposal which will be carried out in Nursing Department in the first semester Academic year 2011-2012 during the "Psychiatric nursing" course, it involves three phases: Phase 1: Use informal focus group session, Phase 2: The experimental session where students will be randomised into two conditions comparing the intervention to an appropriate alternative. Phase 3: Qualitative interviews


The following sections of your research proposal were reviewed in relation to ethical aspects:

- 1- Research objectives
- 2- Methodology: study design and data collection (three phases)
- 3- Questionnaires
- 4- Consent form for the nursing participants
- 5- Interview schedules
- 6- Information sheets

I am pleased to say that the Committee was satisfied in relation to its ethical aspects.

We wish you all the best in your project.

Yours sincerely

  
**Dr. Essam H. Jiffri**  
Chairman, Ethics and Research Committee

المشروعات١٤ / /التاريخالرقم

فاكس: ٢٠١٧١/٦٤٠٠٠٠

ت: ٦٩٥١.٥٩

ص ب ٨٠٣٢٤ جدة ٢١٥٨٩

P.O. Box 80324 Jeddah, 21589

Tel: 6951059

Fax: 6400000 / 20171

Loujain Sharif  
1.32 James Clerk Maxwell Building  
Waterloo Campus  
King's College London  
SE1 8WA

14 October 2011

Dear Loujain,  
**PNM/10/11-154 Comparison of Educational Interventions to Address Stigma of Mental Illness Amongst Nursing Undergraduates in Jeddah, Saudi Arabia: A Preliminary Randomised Trial**

Thank you for sending in the amendments requested to the above project. I am pleased to inform you that these meet the requirements of the PNM RESC and therefore that full approval is now granted with the following provisos:

1. Section 1.4: Please notify the Research Ethics Office of the identities of specific personnel referred to, such as the Mental Health Nurse Team Leader, once these are known.
2. Submit, for record, copy of e-mail from Herman Codner.
3. Information Sheet: Correct misspelling of 'anonymised'.

Please ensure that you follow all relevant guidance as laid out in the King's College London Guidelines on Good Practice in Academic Research (<http://www.kcl.ac.uk/college/policyzone/index.php?id=247>).

For your information ethical approval is granted until 14 October 2014. If you need approval beyond this point you will need to apply for an extension to approval at least two weeks prior to this explaining why the extension is needed, (please note however that a full re-application will not be necessary unless the protocol has changed). You should also note that if your approval is for one year, you will not be sent a reminder when it is due to lapse.

If you do not start the project within three months of this letter please contact the Research Ethics Office. Should you need to modify the project or request an extension to approval you will need approval for this and should follow the guidance relating to modifying approved applications: <http://www.kcl.ac.uk/research/ethics/applicants/modifications.html>

Any unforeseen ethical problems arising during the course of the project should be reported to the approving committee/panel. In the event of an untoward event or an adverse reaction a full report must be made to the Chairman of the approving committee/review panel within one week of the incident.

Please would you also note that we may, for the purposes of audit, contact you from time to time to ascertain the status of your research.

If you have any query about any aspect of this ethical approval, please contact your panel/committee administrator in the first instance (<http://www.kcl.ac.uk/research/ethics/contacts.html>). We wish you every success with this work.

Yours sincerely,

James Patterson – Senior Research Ethics Officer

## **Appendix 9: Participant information sheet**

### **INFORMATION SHEET FOR PARTICIPANTS**

REC Reference Number: **PNM/10/11-154**

**YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET**



#### **Preliminary Randomised Controlled Trial of Educational Training in Nursing and Mental Illness**

We would like to invite you to participate in this original research project comparing the effectiveness of two educational methods in relation to mental health. You are invited to take part in this research study because we are investigating fourth year nursing students at three points in time; at the start of the program prior to commencement of the theoretical lectures, and immediately after the administration of our educational intervention and following the completion of your clinical placement portion of the mental health course. This is because we want to assess the effectiveness of the interventions on the attitudes of nursing students who have not had clinical contact with people with mental illness during this course.

#### **Taking part in this study is voluntary and is not an obligatory part of the course.**

Choosing not to participate will not disadvantage you in any way or affect your grading or assessment in your nursing degree. However, your participation will contribute a great deal to this novel area of research. Please take time to read the following information carefully and feel free to ask about anything which may not be clear or you would like more information on.

#### **What is the purpose of the study?**

The purpose of the study is to determine the effectiveness of two different types of educational interventions on student attitudes to patients experiencing mental illnesses.

#### **Why have I been chosen?**

You have been chosen to participate because we are interested in mental health related training interventions in 4<sup>th</sup> year nursing students. We hope to examine the entire cohort of 4<sup>th</sup> year nursing students enrolled in the Nursing program of King Abdul-Aziz University for 2012/2013 academic year. Your peers will also be invited to participate in this project.

#### **Do I have to take part?**

Taking part in this project is voluntary. If you do you will be given this information sheet to keep and asked to sign a consent form. You may withdraw from the study at any time, without giving a reason, whilst data is in collection however your data cannot be withdrawn from participation of the focus groups, as withdrawal will disrupt the group dynamics or the nature of the study as a whole. In doing so your data will also be withdrawn from the study; this decision will not affect your grades or assessments.

#### **What will happen to me if I take part?**

If you choose to participate you will be invited to participate in the study. This will entail us to provide you with a unique identifier number. We will need to collect basic contact details including your name and contact information. Your unique identifier number will be used to put on the questionnaires that you complete at each of the 3 different time points and will protect your identity in the study.

The study is a randomised controlled trial evaluating 2 new training methods of additional mental health material, not currently in the syllabus. We don't know which training session will have

the most impact in terms of aiding understanding of mental health perspectives. Your session will be about half an hour in length, and in addition you will be asked to complete 3 questionnaires at 3 points in time across the coming year. Each questionnaire will require in the region of 15 minutes to complete. The total hours of participation over the year are less than 2 hours and for this you will be acquiring new and interesting information. The questionnaires and sessions include assessing knowledge, attitudes, behaviour and evaluation of your training session and clinical placement. You may be asked to take part in a discussion group or interview in the later stages of the study. These will be recorded sessions and will relate to your experiences of participation in the study and your experiences of your clinical placement. Interviews will be conducted on a 1 to 1 basis as opposed to the discussions, which will be of a group-based nature. Data will be anonymised for use in this study.

### **Confidentiality**

Your participation in this study will be anonymised and confidential. Since this study requires data collection at various points during the 2012/2013 academic year, your unique identifier number and contact information will be required for future correspondence as you move through the year (at 3 months follow-up and possibly for face to face interviews shortly after). All the information about your participation in this study will be kept confidential. We will use your unique identifier number in place of identifying information. This will be used for data management. All data will be password protected and stored in a locked filing cabinet and/or encrypted USB. The only people with access to the data are the primary researcher and the primary researcher supervisor.

### **What are the possible benefits of taking part?**

The benefits of taking part in this study involve having a role in shaping the nursing curriculum, thinking about your own knowledge, attitudes and behaviour towards people with mental illness and their carers (*those who attend to their needs*). Your participation will allow you access to important training that may be a valuable part of your nursing career.

### **What are the disadvantages and risks of participating?**

There are no anticipated risks for you to take part in this study. The only disadvantages are completing the questionnaires, which may be time consuming. We hope that you will find participating in this study an interesting experience.

### **What will happen to the results of the project?**

The results will be put together in an academic paper. Also a summary will be available to participants on request.

### **Contact Details:**

#### **Please contact the primary researcher with any queries about the study.**

Primary Researcher: **Loujain Saud M. Sharif**

Email: [Loujain.sharif@kcl.ac.uk](mailto:Loujain.sharif@kcl.ac.uk)

Address: Room 1.32 Florence Nightingale School of Nursing and Midwifery, King's College London.

Phone: +966 5033 73 472

#### **If this study has harmed you in any way please contact the primary supervisor**

Primary Supervisor: **Professor Ian Norman**

Email: [ian.j.norman@kcl.ac.uk](mailto:ian.j.norman@kcl.ac.uk)

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**Thank you for taking time to read this sheet.**

## Appendix 10: Participant consent form



University of London

### CONSENT FORM FOR PARTICIPANTS IN RESEARCH STUDIES

Please complete this form after you have read the information sheet and or listened to an explanation about the research.

Title of the study: **Preliminary Randomised Controlled Trial of Educational Training in Nursing and Mental Illness**

King's College Research Ethics Committee ref: **PNM/10/11-154**

*Please tick the boxes*

- Thank you for considering taking part in this research. The person organising the research must explain the project to you before you agree to take part.
- If you have any questions arising from the information sheet or explanation already given to you, please ask the researcher before the start of the project. You will be given a copy of this consent form to keep and refer to at any time. ☐
- I understand that if I decide at any other time during the research that I no longer wish to participate in this project, I can notify the research coordinator involved and be withdrawn from it immediately. In this scenario, my data will also be withdrawn from the study.
- I consent to the processing of my personal information for the purposes of this research study. I understand such information will be treated as strictly confidential and handled in accordance with the provisions of the UK data protection act 1998. ☐
- The information you have submitted will be published as a report and you will be sent to copy upon request. Please note that confidentiality and anonymity will be maintained and it will not be possible to identify you from any publications. ☐
- I consent to my interview / focus group being recorded if I am participating.

#### Participant's statement:

I, ..... agree that the research project named above has been explained to me to my satisfaction and I agree to take part in the study. I have read the notes written above and the information sheet about the project, and understand what the research study involves.

Signed

Date

#### Investigator's Statement:

I **Loujain Sharif** confirm that I have carefully explained the nature, demands and any foreseeable risks (where applicable) of the proposed research to the participant.

Signed

Date



## Appendix 11: Filmed DVD intervention manuscript

Florence Nightingale School of Nursing  
& Midwifery, King's College London



### FILMED DVD INTERVENTION MANUSCRIPT

#### Prologue

The film you are about to watch will discuss some of the important issues that influence the experience of mental illness.

It consists of real life stories of people who have suffered from a mental illness; sometimes referred to as 'service users'.

Their stories aim to provide you with an insight into what it means to suffer from a mental illness.

This film should also help you understand stigma and the influence it has on people's experiences of mental illness.

An Educational Film on Mental Illness

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#### Introduction by Professor Graham Thornicroft

My name is Graham Thornicroft, I'm a consulting psychiatrist working in a mental health team in south London and also I am professor of community psychiatry at the institute of Psychiatry, which is a part of King's College London.

I would like to introduce this film to you. What you are going to see are the stories of people with mental illness and also stories by their careers, family members. You are going to hear both stories of struggles and stories of triumph. Stories of exclusion, stigma and discrimination and stories of hope and recovery and you are going to find I think very informative and I hope moving many of these different accounts. Now I've got two particular reasons to be interested in this topic first of all with colleagues around the world I've been taking a series of research studies forward. For example in one study recently we asked nearly a thousand people with Schizophrenia about their experiences of stigma

and discrimination across thirty countries worldwide. Now I've been a psychiatrist for 20 years but I was amazed to find just how common stigma and discrimination are. We found that nearly two thirds of all these people have had very important forms of social exclusion for example being refused jobs, for example their wife or their husband walking out when they first had a mental illness. And in fact stigma is often described as being worse than the main condition itself.

But also I've got a more personal reason for an interest in this topic about 50 years just after my sister was born my mother developed severe postnatal depression. She was really unwell and in fact she needed electroshock or ECT therapy to get better she was working as a district nurse but had to take a year out and recently I said to her I said mum "when you went back to work what did you say to your boss about why you'd been off sick?" she said "Nothing are you crazy of course not" she feels that she would have never gone back to work, never been allowed to work again if she had told her boss the real reason for her absence. Today nearly 50 years later, I am not sure we have made very much progress. Still in these stories you hear about experience of discrimination of exclusion of being shunned of being avoided by people who have a mental illness. So this film is designed to give you more insight, more understanding more information from the perspective of people with mental health problems and their family members about what its like to have these conditions and what its like to struggle for recovery and for hope and to fight against stigma and discrimination.

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### **Scene 1: Jacob Ramsey**

Hello my name is Jacob Ramsey and I am here today to talk to you about an issue that's near and dear to my heart. One that affects every person afflicted with mental illness as well as their loved ones. Those of us, who suffer daily from mental illness face additional suffering the pain we feel from being judged, excluded and avoided by others. I am talking about stigma. Take it from me stigma hurts; stigma destroys the spirit of not just the mentally ill but everyone. It eats away at the common bond of our humanity. The random house unabridged dictionary defines stigma as a mark of disgrace of infamy a stain or reproach as on one's reputation the root of the word comes from the Greek meaning a mark or puncture especially one made by a pointed instrument. That's certainly

the way stigma feels to me and my mentally ill brother and sisters. The word crazy makes me crazy. I am not a crazy person or a diagnosis. I'm a human being. Calling us crazy is degrading its blaming us for a medical condition it labels us as subhuman's who are out of touch with reality we are not crazy or bad or worthless or lazy or dangerous. We have a brain disorder that places certain limits on our functioning and requires our response to treatment. Stella March the national coordinator for NAMI the (National alliance for the Mentally ILL) and a dear friend of mine once told there would always be chances to educate people and help change the world's false perceptions about mental illness. These words have become my mission. My response to those who stigmatise is to educate them. I tell them that mental illness is a medical condition, a disorder of brain chemistry. I ask them if they would put down, blame, label or shun someone with another medical condition like diabetes. I tell them that we are constantly seeking and finding ways to manage mental health. I remind them that every mentally ill person is a human being with feelings and potential. This is my way of stamping out stigma. I also educate others by reminding them of some of the mentally ill people who have made great contributions to society many have had the courage to speak out about their conditions to help erase stigma and encourage others to seek treatment. The great mathematician and Nobel Prize winner John Nash suffered from schizophrenia. Actress Patty Dew, journalist Mike Wallis, athlete Terry Bradshaw and writer William Styron all suffered from clinical depression. Abraham Lincoln is thought to have suffered from chronic depression and Winston Churchill probably had bipolar disorder. Mental illness is painful but stigma can be just as bad. Stigma makes people feel isolated, ashamed and scorned. It sometimes leads to discrimination or violent acts against the mentally ill and homeless. Worst of all, many people with mental illness hide their problems and avoid getting help because they are afraid of being labelled and stigmatized. We can all do our part by helping wipe out the prejudice and misunderstanding. Please join me in my mission to stamp out stigma. Together we can stamp out stigma. Yes, we can!

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## **Scene 2: Arabic audio scenario clip of a stigmatised arranged marriage proposal of a man suffering from a mental illness**

**Narrator:** "In one of the days..."

**Bride's father:** "On god's blessing, but you know everything is a matter of fate and destiny...god willingly you will find your destiny with us"

**Grooms father:** "God willingly. Take care and good bye"

**Bride's father:** "Honest to god the people turned out respectable and the gentleman suitor is god protect him is stable, quiet and polite. Not to mention the fact that he is a job position as big as the world."

**Bride's mother:** "Yes I agree with you. But why should we rush. Let us ask about them properly"

**Narrator:** "And after a week..."

**Bride's father:** "May god help those people"

**Bride's mother:** "What people?"

**Brides Father:** "The people that wanted to propose to our daughter, their son turned out to be mentally ill and he used to go to the mental hospital."

**Brides Mother:** "What do you say?!? Do they think that I found my daughter from the street? Call them now and tell them they have no destiny with us."

**Narrator:** "The mentally ill is a human being with the right to marry, receive care, work and receive protection. No to isolation. Yes to the welcoming arms of society."

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### **Scene 3: Personal accounts of mental illness and stigma, by Patricia, Silvie, Mark and Lydia.**

**Patricia:** Everybody knows what it is like to so-called lose it. Imagine you were in that state for days, month's maybe years on end in that same state.

**Silvie:** I have been very upset by the reaction of people with me when I am mentally ill it's another extra burden on top of a very traumatic hideous illness.

**Mark:** Being left behind by communities of people has been extremely soul-destroying and has left me developing worse illness over the years.

**Lydia:** Once you are diagnosed with a mental illness it's a stigma against you for life.

**Silvie:** I was always out and about and being hypermanic and wanting to be outside and showing off that I was invincible and in fact there are two people now that still won't speak to me because of it.

**Lydia:** Most of my friends once they found out I was mentally ill and had to stay in hospital dropped me they had young children and maybe they thought that I would harm them. That really upset me because I knew them from a long time especially from when I was small.

**Mark:** It's because of indifference and it's not ignorance its fear of what mental illness is.

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#### **Scene 4: Arabic audio scenario clip depicting stigma at the workplace towards an individual with a history of a mental illness**

**Employer:** "Thank god for your safe return Abu Waleed. 10 years, Oh god that is seriously a long time"

**(Abu Waleed) Employer's friend:** "They went by like a blink of the eye, but between the two of us there is no where better than our country"

**\*\*Knock Knock\*\***

**(Ziyad) Employee:** "Hello"

**Employer:** "Welcome welcome Ziyad come in."

**(Abu Waleed) Employer's friend:** "Are you Ziyad the son of father of Abu Ziyad, who is Abu Ziyad?"

**(Ziyad) Employee:** "hello Uncle Abu Waleed. Welcome back. Thank god for your safe return.

**(Abu Waleed) Employer's friend:** "Thank you. May god keep you safe. Send my warmest regards to your father.

**(Ziyad) Employee:** "I will. Take care and excuse me I will get back to my work."

**(Abu Waleed) Employer's friend:** "Good luck"

**\*\*Employee leaves the scene\*\***

**(Abu Waleed) Employer's friend:** "May god bless Ziyad. Look where he was and where he is now.

**Employer:** Why what was wrong with him?

**(Abu Waleed) Employer's friend:** Don't you know he was mentally ill?

**Employer:** No not at all!

**(Abu Waleed) Employer's friend:** What are you doing?

**Employer:** I am calling the finance department to close his file and terminate him. I don't need a crazy employee.

**Narrator:** I am not crazy! I will live a respectable life if you help me and extend your supporting hand. Please don't deprive me of life. No! to isolation. Yes to the warm arms of society.

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**Scene 5: Personal accounts of mental illness and employment, by Patricia, Silvie and Mark.**

**Patricia:** I was working for a small company here in London and I happened to go down with my mental illness and I had to go into hospital. My boss found out I went into a mental hospital and when I went back to get the job he said it was no longer available.

**Mark:** I think that some people will be passed over for promotion because I don't think people will be deemed capable. There are very few people working in higher management with severe mental health problems.

**Silvie:** The problems with employers are does one say I am mentally ill or does one hide it and not tell them?

**Scene 6: Staged clip noting how stigma to mental illness impacts employment decisions.**

**Employer 1:** Jeff your resume is impeccable, is there anything else you'd like to add?

**Applicant 1 (Jeff):** Well I did have to go on disability last year for my Obsessive compulsive disorder and depression mmm I am on some new medication and doing very well. I would like to get back into the work force.

**Employer 1:** Okay. Mmm just so you're aware we are only accepting applications right now.

**Jeff:** Okay.

**Applicant 2 (Jane):** Well I did have to go on disability for awhile because of my diabetes but I am on some new medication now and I feel much better so I'm ready to get back to work.

**Employer 1:** If chosen could you come in on Monday for training?

**Applicant 2 (Jane):** sure that would be great.

**Employer 1:** Okay.

**Employer 1:** Will, Jane isn't as qualified and she has diabetes, but Jeff has a history of mental illness! \*laughs mockingly\*

**Employer 2:** Yeah. You can't have somebody coming in here and shooting up the place.

*STUDIES SHOW THAT PEOPLE WITH MENTAL ILLNESS ARE NO MORE VIOLENT THAN THE GENDERAL POPULATION.*

*1 IN 4 ADULTS SUFFER FROM A MENTAL DISORDER*

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**Scene 7: Personal accounts of mental illness and media portrayal, by Mark and Patricia.**

*60% OF PEOPLE WITH MENTAL HEALTH PROBLEMS BLAME MEDIA COVERAGE FOR DISCRIMINATION THEY EXPERIENCE IN THEIR DAILY LIVES.*

**Mark:** I think there's times when media reporting hate is really negative and through portrayal of what the media say the public think that the people with mental health problems are violent and that isn't the case.

**Patricia:** They never put in a positive story, you always hear the horrible stories you know mad man kills but they never put in crazy person gets job and becomes well and marries and has children. It is just blatantly obvious the way they think of us.

**Scene 8: Personal accounts of mental illness by Yvonne Stuart Williams, Stevie White McQuillan and Kate Hackney**

**Yvonne:** My mental illness is schizoaffective disorder when I am unwell it affects my mood and perception but fortunately it's treatable. People think that mental illness is a very rare thing. That's not true. At least 1 in every 4 people have mental health issues at any point in their lives.

*HOW DID YOUR FRIENDS REACT TO YOUR ILLNESS?*

**Yvonne:** Over a period of time they stopped associating with me because they didn't understand. And all the good times that we had together and the friendships and the depth of friendship that we shared seemed to amount to nothing when I was most in need. On some occasions when they saw me on the street they didn't even look at me. And it felt like abandonment. It was painful.

#### *WHAT CAN PEOPLE DO?*

**Yvonne:** Sometimes it might be difficult to know what you can do to help. You want to but you don't know how too. Send a text message even if its just to say I am thinking about you hope you are alright today, keep in touch, let me know how you are really. If you can't find them just text them.

#### *HOW DID PEOPLE HELP YOU?*

**Yvonne:** I had a few other friends who stayed with me throughout the 15 years; the practical support that they provided was probably taking me out to dinner, to theatres, to cinemas you know like that kind of thing. Sending me text messages. You know like phoning me up. They've included me in what's going on for them so they haven't sort of like said "Well Avon is in a particular bad way, we can't burden her with our...they've included me in what's going on with them and they just treated me as normal regardless. Well I don't know where I would be without them.

**Stevie:** When I was diagnosed with schizophrenia it was quite frightening for me. So I can understand when other people are afraid and I think that's the biggest thing I get from people is fear mainly because of the images that they have received in the media.

#### *HOW WOULD YOU DESCRIBE YOUR ILLNESS?*

**Stevie:** Paranoid schizophrenia is best described as having hallucinations and hearing voices and having what people call delusions which is where you think something is going to happen that isn't going to happen but it is only during period of illness that you actually have most of those experiences outside of those times you just have maybe mild symptoms or sometimes no symptoms at all.



One of the myths about schizophrenia is that people with schizophrenia are violent but that couldn't be more further from the truth because I am a complete wuss and most people with schizophrenia are more likely to be violent towards themselves than to other people or to be victims of violence.

*HOW DID YOUR FRIENDS REACT TO YOUR ILLNESS?*

**Stevie:** My friends were not very understanding when I was first ill and not very many of them are my friends now. I wasn't surprised by the way my friends reacted because I could understand their fear about schizophrenia but I felt let down.

*ANY POSITIVE REACTIONS TO YOUR ILLNESS?*

**Stevie:** I was very lucky that my partner stayed with me and visited me every day even the bad days when I couldn't face talking to people.

*ADVICE FOR PEOPLE THAT KNOW SOMEONE WITH A MENTAL ILLNESS?*

**Stevie:** Just be patient and take people as you find them. Sometimes when you are really ill you just haven't got the headspace for having a conversation with someone but still it is very important to see someone for 20 seconds, you know a minute just to know that they are there for you.

I think the biggest thing I can suggest to people is try not to look surprised because it is a real shocker when you say paranoid schizophrenia and people go **Huuuh** and it would just be nice to see a normal face looking back at you.

**Kate:** Schizophrenia just means that when I become unwell my brain slips I feel very confused and I don't know what's going around me. But it is treatable and I take medication for that.

*HOW DID YOUR FAMILY REACT TO YOUR ILLNESS?*

**Kate:** Well my mum she was really good because my mother researched everything from the internet and really wanted to help and very supportive and my father kind of just didn't understand in the beginning, didn't have any knowledge but went out and researched more, and became involved more and we have a great relationship today.

### *HOW DID YOUR FRIENDS REACT TO YOUR ILLNESS?*

**Kate:** I had a group of friends from school and they suddenly started to say things like oww your weird, you're strange you are a nobody, you're a loser, and you just don't make sense and just didn't want anything else to do with me. It really really hurt it was horrible. And then suddenly it just went it was like nobody phoned me up. I was ill and I didn't know what was going on and I was too frightened its strange because I had known those people for such a long time that there was part of that wanted to phone them up and say hey what's going on but there was part of me that thought well if you didn't stand by me then that's your loss. But it was horrible. It was like losing my life. It was awful.

### *DID ANYONE REACT POSTIVIELY TO YOUR ILLNESS?*

**Kate:** I've got a friend Natalie who is very very supportive. Takes me for who I am believes in me and understands me and just realises that you know, that I am okay. Just because I have a mental illness doesn't mean I am going to go attack her or hurt or anything like that. Its just I have a mental illness. She's just always on the phone to me all the time. She phones me up we talk about normal things often posting me cards and bits about my illness and stuff like that and its very supportive so that's good.

### *ADVICE FOR PEOPLE THAT KNOW SOMEONE WITH A MENTAL ILLNESS?*

**Kate:** If I was going to say anything that could really make a difference it would be not to be frightened of that person who's got the mental illness and maybe try and learn and educate yourself a bit about mental health rather than, you know, just cutting off. It is something that needs to be explored, its something that needs to be talked about its something that is important.

### **Scene 9: First person account of mental illness by a previous service user, Jane.**

The first time that I realized I had been sectioned I actually, it was really the first time that I realized or I had been told that I had a mental health problem was I came to in a ward about midnight maybe one o'clock in the morning and had no idea where I was and

mmmm I had to kind of you know just find somebody randomly walking around and ask them where was I and I got told that I was in a psychiatric ward which kind of didn't make an awful lot of sense to me and then I guess I must have went to bed and all honestly I cant remember much more after that and in the morning I guess you know I would have seen a psychiatrist and was told that I either had psychosis or schizophrenia and it was kind of like just overnight my whole life really had completely changed. Mmmm I was also told that I had been sectioned and so I was going to have to be in the hospital for at least a month. I was told that I was allowed to appeal against that which I think I did go on to do. I know that I left the hospital after the section was up. So I was there for a month mmmm and just you know the whole experience of being locked up in inside a psychiatric ward you know one day I'd kind of be been walking around as a free human being and the next day I'm in a ward I am unable to even step off the ward without having somebody with me. Once I got out of the first time that I was sectioned mmmm I just you know kind of tried to readjust to this idea that I was suddenly this ill person and I had this sickness and you know was it going to go away? And what was is it? Nobody really knew. I was being told it was a chemical imbalance but did that really provide me with any answers? No. Was the medication working? No, not really. It had some effect but I was still hearing voices, I was still seeing things. Mmmm And also very much I was very aware that once I had left hospital I was, because I had been sectioned, I was legally bound towards going to see a psychiatrist every 6 weeks from that point on and if I didn't attend that appointment they would send the police to come and find me. Mmm but every time you'd go and see the psychiatrist, you would literally be there for 5-10mintues are your meds working?, what side effects do they have? And that would be the limits of the discussion you would have with the psychiatrist and other than that you were never, I was never, offered any other form of treatment.

I kind of went on, after that, I landed up over the three years being sectioned three different times and the last time I was sectioned I actually mmmm felt that I was doing pretty well. I was kind of beginning to recover. My parents pleaded with the psychiatrist not to section me. My GP actually travelled twenty miles to come and see the psychiatrist to plead with him not to section me but unfortunately he was quite stuck on, you know, convinced that I should be sectioned. And mmmm yeah, I proceeded to spend another month on a ward and as always, it would always happen whenever I was sectioned I always left hospital on double the amount of medications then I was on when I first went

in and normally with double the amount of symptoms, I'd be hearing more voices, seeing more things, it was, I was always in a worst state and it would take me ages to recover once I'd left hospital it would take several months for everything, for the voices to calm down and then I could slowly start, you know, reducing the medication. I always found being sectioned a negative experience it wasn't helpful at all. Mmmm Where I got really lucky, was the last time I got sectioned as I said my family were like please don't do it and as a result they actually took me to see a private psychiatrist mmm who was attached to a private hospital and that for me was a total turning point in my recovery as he promised never to section me and I think just that being given back, some control over my life and kind of he recognize that I had enough insight into what was happening to me and that I would know what I needed rather than him knowing what I needed and mmm that was incredible for me and kind of really I was given the time to finally allow the experiences that I was having to kind of run their course rather than being disrupted mmm with the trauma of being sectioned. In within a year of being assigned to him I've made a pretty much full recovery, I'd stopped having any voices within 14 months I'd stopped having any medication and that was thirteen years ago and I've since then not had any medications or any symptoms. So I just, even for me, just by simply having being sectioned removed allowed me to recover. I think, I feel, so lucky that I was able to actually make a full recovery. I think I feel it was so contrary to what I was being told from the mental health system and even from the private health system that I feel its really, its so important that we recognize that people can recover its actually compelled me to go and work in the field of mental health and ive actually trained as a psychotherapist. Because I just feel there are some very simple things that we can do to assist people who are experiencing psychosis or schizophrenia. And that's just really, there's been a lot of research and from my own experience I am very aware that if you allow somebody to talk about the content of their experiences that can really help that person explore what is happening and explore where those experiences fit in the context of their life, quite often they are associated with a trauma that that person has had. You begin to be able to understand what is happening and by understanding very often those symptoms and experiences begin to dissipate, just because you've explored them and understood them. Another thing that I felt very sure about was one of the things that helped me within the private healthcare, was that I was allowed to see the same psychiatrist on a weekly basis and there was some sort of continuity of care it is a very simple thing to give somebody and can make such a big difference.

**Scene 10: A personal account of depression by Nina, and her mother's (Anal) perspective**

**Nina:** Hello I'm Nina and I have depression.

**Anal:** Hi I am Nina's mum, Anal.

**Nina:** I think the benefits of being able to talk about my mental health with family and friends in particular my mum who's been great mmmm is just feeling less alone that someone, even if they can't directly understand what you're going through, it's just a hard journey from diagnosis to treatment everything like that so I don't think anyone should have to do that journey alone.

**Anal:** In the early days when I first kind of found Nina upset and stuff I really didn't understand because there was no family history either from my side or my husband's side for depression full-stop. Mmmm and it was very difficult for me to understand why she was feeling the way she was and it was a case of feeling really helpless and the more she started to talk, which took a long time because she didn't want to worry us, but the more she opened up I then realized, being in the mental health field working myself in the inpatient, that do you know what, I think it's time to get the treatment it was only through talking that made us aware that things are not quite right and it wasn't just the teenage age not just the hormones because I was kind of in denial.

**Nina:** I suppose I was most open with how I was feeling with my brother, mmm he's a couple of years older than me and I'd tell him how I was feeling and that's one of the ways in which I first realized that maybe how I'm feeling isn't quite normal, although I don't like using that word, but it's slightly different to how other people my age are feeling and how they react to situations and I think also by describing how I feel to him it was a good outlet as well.

**Anal:** Growing up in an Asian culture like Nina has mmm she's been one of the lucky ones I would say, because she was liberal, would you not say, to a larger degree but in

the early days certainly, Yes, there was a lot of shame a lot of kind of embarrassment as though we were almost embarrassed to tell friends say if there was a family gathering for example, if Nina didn't feel up to coming she would be put under pressure in some occasions to come, oww you've got to come, you've got to come. Or if she didn't come what would we say to people at the wedding why Nina didn't come. So there was a lot of hiding kind of stuff from our point which was very wrong but as we have evolved together through this really painful journey, we have gotten a lot closer, and obviously the family do know about it now and it is generally more accepted.

**Nina:** I think the person that changed the most in our family is my dad. Mmmm we had, we didn't really discuss emotions at home when I was growing up as I say but more recently we've been talking about like when I was younger and looking back I've been sharing my perspective with him and he's been sharing his perspective with me, because we were all in the same boat of not knowing what to do for the best so yeah I think talking about it even reflectively now is just a help and its brought us all closer together. Its helped people well it's helped us all understand a lot more about mental illnesses mmm so I think its just important for everyone to talk about them.

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**Scene 11: Personal account of mental illness by previous service users, James and Jane.**

**James:** Schizophrenia is a very emotive word and its often been linked with violence in many stories. They are saying that every time someone with a mental health illness like schizophrenia commits a murder then it has to have a public inquiry which is going to make the media much more hungry for those kind of stories because they are going to be in the press more. However, it's a sad fact that people with mental health problems are much more likely to be victims of crime than they are perpetrators of crime and to compound that as well we are much more likely to have our evidence dismissed because of our mental health problem as well so we are much less likely to be believed so because of that reason many people who have mental health problems who are victims of crimes don't actually report it as such because they fear the fact that their evidence may be dismissed on the grounds of their mental health problem.

**Jane:** If you were to believe everything that you see in the press it very much appears that people with mental health problems are continuously murdering people and are always committing acts of violence against other people and it's a known fact that 95% of all murders that happen each year are not associated with anyone who has been in contact with mental health services so I think the media very much misrepresents people with mental health problems.

**James:** I think the media needs to take responsibility for people's attitudes to mental health and crime. As I said, it is much more likely that someone with a mental health problem will be a victim of crime rather than a perpetrator but I am not denying the fact that people with mental health problems do commit crimes and sometimes-violent crimes. However, often that can be shown that its been the cause of a lack of support for that person or its been because their mental health problem has been exacerbated with illegal drugs or drink and of course that combination often does lead to crime.

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**Scene 12: Mental illness and recovery, as explained by Professor Graham Thornicroft.**

Professor Graham Thornicroft: A question that often comes up is; is it true that a person can recover from a mental illness or are you stuck with it for life? Let's take an extreme example, Schizophrenia; many people say its one of the most disabling conditions among the mental illnesses and people used to think that maybe only about a third of people with schizophrenia ever recovered. That's wrong. In fact it's more like a half. So up to a half of the people who develop schizophrenic symptoms will eventually recover and a quarter of the remainder will make a very substantial recovery within months or years. So the fact is that most people, even with the most severe mental illness, can and do recover.

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**Scene 13: Personal account of mental illness by previous service users, Jane and James.**

**Jane:** I think it's completely possible to recover from schizophrenia mmm I've made a full recovery from schizophrenia. I was diagnosed in 1992 with schizophrenia and by 96 I had no symptoms or did not need to take any medications and I've had nether symptoms or medications since then. The figures suggest that 1 in 100 people will be diagnosed with schizophrenia at some point in their life and figures or research categorically knows that 20% of people with schizophrenia make a full recovery and this is something that very few people know.

**James:** if I didn't believe that people with mental health problems could recover then I don't think I'd be sat here now. I was 18-19 years old when I was first diagnosed with schizophrenia having come out of the army. And back in those days there was an heir if you like where it was a culture of low expectations for people who were diagnosed with schizophrenia and my parents were told that I would probably be in supported housing, that I'd probably never work, never hold down a long term relationship and that my life was pretty bleak from that point on.

**Jane:** The language of hope, of telling people who have schizophrenia or psychosis when you give them an original diagnosis its really important to tell people that they can recover, that this isn't a lifetime sentence and we know that hope can change the way you feel about yourself can actually change the outcome of your so-called illness and so I think its really really important that we work on a more positive basis and actually tell people they can recover and I'm quite sure that if you tell people that they can recover they will but if you take away the opportunity of being able to recover by constantly telling people that they will have this for life then you know it's a self-fulfilling prophecy.

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**Scene 14: Arabic clip of first person speaker detailing her journey with mental illness**

When I first started grade 10 my condition totally flipped. I no longer liked going to school. Each time I would go to school I would say I don't want to go anymore. I didn't like the reading, I didn't like the studying. I wanted to just stay at home and not complete my studies anymore.



After that my condition deteriorated a lot and I became very sick. At first, I used to suffer from the situation of being an introvert. I was very very much an introvert. I used to sit with a psychologist called “Ahmad’s mother” and I used to reveal a lot to her and she used to help and support me and stuff like that. She used to tell me when I went back into school “Put in your mind that you will study and that’s it ... and trust me you will succeed”. She walked with me step by step in my studies. And she helped me a lot. Until I finished high-school thanks to god, and she told me even though you finished school you now have to enter college. And I entered college and this is my last semester even though I face a lot of trouble. I was taunted by a lot of people in my building saying “but this girl is not going to succeed and she will never get good grades ever and that this girl is stupid” and stuff like that they would say. Even though they used to say all that, I used to just not pay attention to what they say and ignored them and wouldn’t answer them. And here I am, Thanks to god, I succeeded and this is my last semester and so far I got an overall grade percentage of 77% and god willingly if I graduate this year I will continue for two more years and get a bachelor.

Treatment helped me a lot and stuff like that, it helped me live a normal life and to get along with myself and the people around me. I used to be very very introverted, but after my treatment I became normal. Free very free I became. And I talk with everyone, and tell stories and laugh thanks to god I became well. I wish and would also like to advise others to go see a doctor, and don’t be embarrassed of their mental illness. I hear a lot of people say “why should we go so that they will call our daughter crazy or dumb, no we won’t let her go”. I would recommend them to go see a psychiatrist and visit a mental health center and follow up with a psychologist. When they go to a psychologist she will help them to vent their problems and help resolve them and to continue their path towards a bright future.

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**Scene 15: Arabic audio scenario clip of folk medicine and witchcraft being used to treat an individual with a mental illness.**

**Father:** “Are you sure this is the solution?”

**Friend (Abu Hassan):** “Man, God cured many people on his hands, his hands are blessed.”

**Friend (Abu Hassan):** “Peace be upon you your Excellency”

**Witchdoctor:** “And peace be upon you, welcome step in with your right foot”

**Father:** “Oh my goodness”

**Witchdoctor:** “Which one of you is the one?”

**Father:** “My son, my son your Excellency, all the night...”

**Witchdoctor:** “I know I know everything they told me before you did. Come with me son, don’t be scared and you guys wait here”

**Father:** “Abu Hassan listen...my heart feels doubtful are you sure?”

**\*\*son screams in the background (enough enough)\*\***

**Friend (Abu Hassan):** “Man, Man I am telling you his hands are blessed”

**Narrator:** the Human being is an enemy to what he is ignorant about. And ignorance to mental illness opens the door to superstitious acts and witchdoctors. Time is precious. If we don’t speed up and request a cure for a mental illness today it may not be of worth to us later.

**Scene 16: First person speakers detail their experiences.**

“Somebody knows me first as Liz and then I might say I’m a doctor and then I’ll say oh and I’ve had some mental health problems. “

“Paranoid Schizophrenic”

“Anorexia”

“Borderline personality disorder”

“Self-harming”

“Schizoaffective disorder”

“Clinical depression”

“It’s not a good line...Hi I’m Lizzy I’m manic depressive”

“Nutter”

“Psycho”

“Weirdo”

“Mad”

“If I break my leg you can see that it’s in a cast but if I’m suffering from depression you can’t see that”

“Do you know why it’s called cracking up? Because you feel like your cracking, your head is cracking into million of bits”

“I’ve been sectioned round about 10 or 11 times now although I am not going for any kind of record”

“I get a lot of swearing in my head and you know I wake up every morning to stupid f\*cking b\*tch”

“I kind of went to the GP with it, a paper written in third person; Dawn has been shouting Gandalf all weekend and slid it across the table, that was a eureka moment because then I knew what was going on. I knew what monster I was dealing with”

“People often feel that it’s self-indulgent”

“Those are people who haven’t had depression”

“Once it was in a newspaper and I was so appalled I grabbed it out of everybody’s hand and said they are making that up”

“A person’s mental health symptoms are not the person”

“A person likes me for whom they think I am but what would happen if they knew who I really was”

“People come up to me and them waving the finger at me”

“I’ve had eggs thrown at my door”

“For about two years really every time I went out of my front door I got either verbal or physical abuse”

“Someone said that my mom was a psychopath”

“They gained some sort of credit for beating a psycho up”

“One of the questions was would you be happy living next door to someone with a history of mental health problems? And one woman turned to me and said “I really wouldn’t but only because I’ve got children”. I said why? Why would that make any difference? I’m pretty sure we don’t eat babies”

“We need to dispel this myth that we are all crazy axe murderers, the only person I’ve only harmed is myself”

“It’s an awful feeling it’s like nobody likes you or loves you”

“Nobody really wanted really wanted to touch me with a barge pole as soon as they heard I had a mental illness”

“Some people think that John’s mad, and that he is going to attack them or attack their children so they keep their children away from my children”

“Mental illness I mean what? Would we live without Churchill?”

“Abraham Lincoln”

“Marie Curie”

“Charles Darwin”

“Florence Nightingale”

“He was just my brother and he wasn’t my brother the schizophrenic. It came as a real shock to me when he decided to take his own life”

“You go to the hospital expecting to see somebody else’s son”

“Suicide is the biggest killer of young men under 40 in this country“

“It’s the end of your world, it’s like someone has taken a piece of you away you don’t, and you don’t ever expect to outlive your children”

“As far as I know a normal life to be I live a normal life”

“It’s actually not a bad thing to be **\*\*muffled overlap of voices\*\***”

“Don’t shun us, you know, we are just like everybody else”

**Scene 17: Arabic audio scenario clip of two personal statements of a young man (Ahmad) and a teenager (Noor) with mental illness**

**Narrator:** Ahmad, 22 years old, is mentally ill in one of the hospitals and works as an employee in a private company.

**Ahmad:** I am a human that suffers from a mental illness. But the negative treatment of people towards me has affected my life and my psychological wellbeing especially in my marriage.

**Narrator:** Noor, 13 years old, has a mental illness and is a student in middle school.

**Noor:** I am not crazy. I know how to draw, write and colour and answer correctly in class. My mum takes me to a an old lady to treat me but I am scared of her and I don't like to go to her

**Narrator:** Life is a gem. Its light is the mind. The mentally ill is not violent. On the contrary he is peaceful and needs love, trust and treatment. None of us are protected from mental illness. And for every illness there is a treatment. When in the need for safe and healthy treatment you should visit the local community mental health centre. I am not crazy. Mental illness is just like any other illness. It has its causes and its treatment god willingly.

**Scene 18: Conclusion by Professor Graham Thornicroft**

I hope that what you have just seen in this film gives you greater insight into understanding the situation of people who have a mental illness and also the perspective of their careers and family members. I hope you now have more information about what it's like to go through those experiences yourself and also to be able to react more sympathetically when you meet people with mental illness or at least people who declare that they have a mental illness.

There are several key important themes; first to listen about what people say about what their needs for support and help are. Secondly, to talk about mental health problems and not to keep it clouded under a shroud of secrecy. And third, to understand that these difficulties are treatable and that the majority of people with mental illnesses can and do

recover. So it means all of us fighting against stigma, fighting against discrimination and understanding the need for hope that will promote the recovery of people with mental health problems.

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**Closing Remarks:**

Thank you for taking the time to view this educational film.

The content of this film was drawn from a number of sources primarily:

Step upon second. Org

Rethink.org

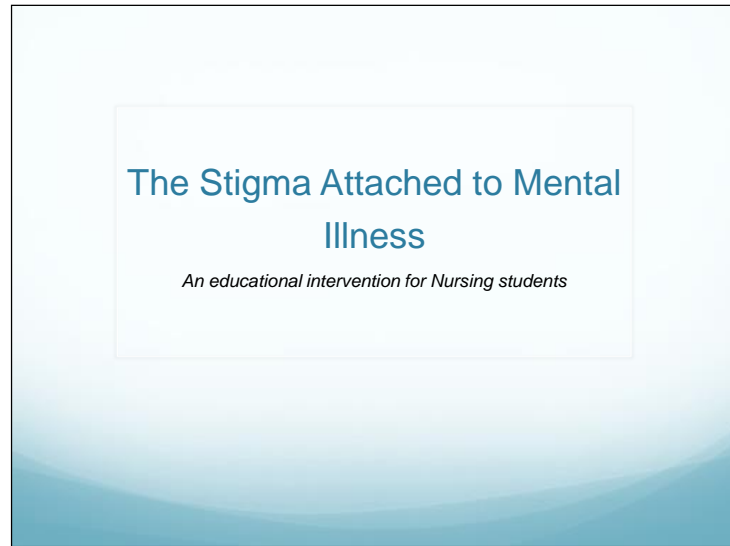
Time-to-change.org.uk

On your own and without discussing with your colleagues please complete the post clinical placement questionnaire.

There are no right or wrong answers. It is your views that we are interested in. Thank you.

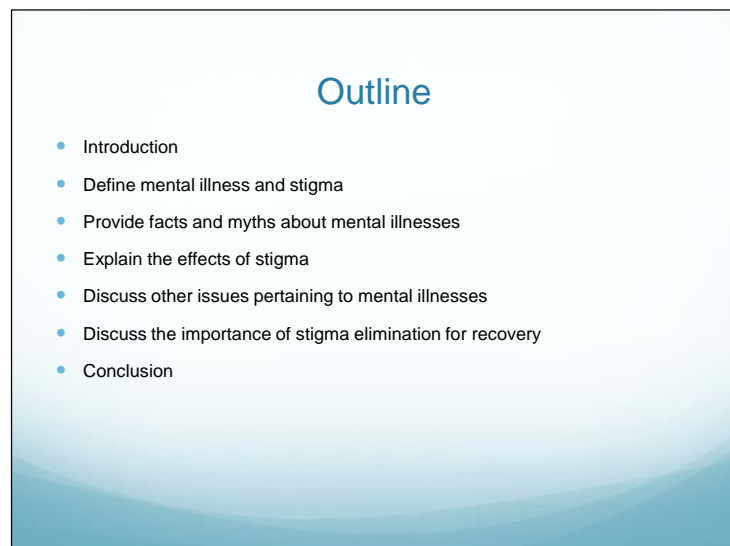
## Appendix 12: PowerPoint lecture condition slides with notes

### Slide 1



Good morning everyone and welcome to this educational training session on stigma to mental illness.

### Slide 2

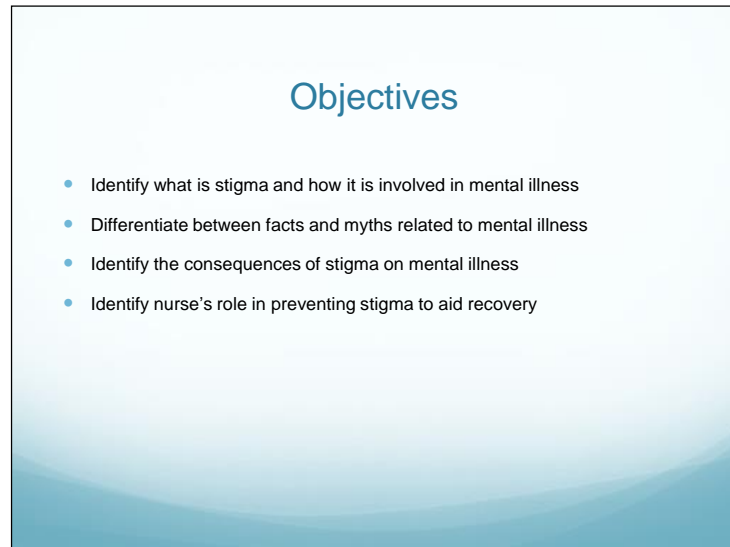


My starting point for today's lecture will be defining stigma and mental illness and explaining the effects of stigma and discrimination. I will also be discussing common



myths or falsehoods pertaining to mental illness. Finally, I will shed light on the importance of stigma elimination for recovery.

### Slide 3

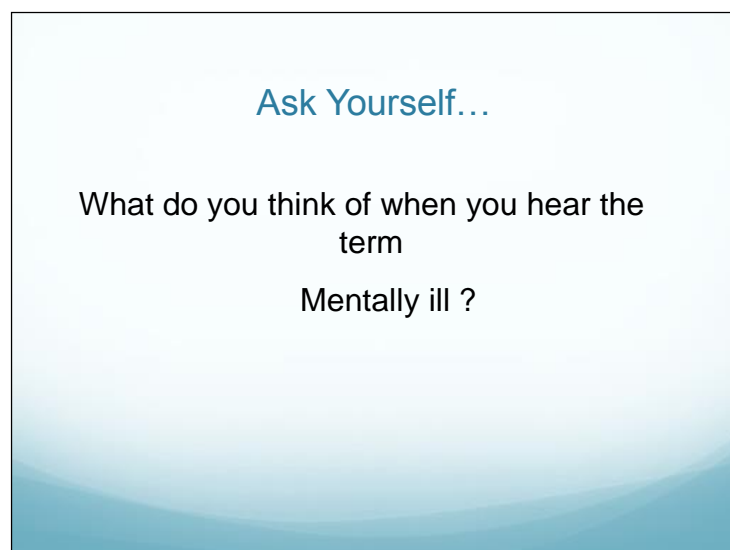
A presentation slide with a light blue background and a darker blue wavy pattern at the bottom. The title 'Objectives' is centered at the top in a blue font. Below it is a bulleted list of four objectives.

**Objectives**

- Identify what is stigma and how it is involved in mental illness
- Differentiate between facts and myths related to mental illness
- Identify the consequences of stigma on mental illness
- Identify nurse's role in preventing stigma to aid recovery

After this training session, I would expect that you will be able to define stigma in relation to mental illness, while being able to differentiate between facts and myths involved in mental illness and explain the influence that stigma has on mental illness. Finally you should understand your role as a nurse in preventing stigma to mental illness

### Slide 4

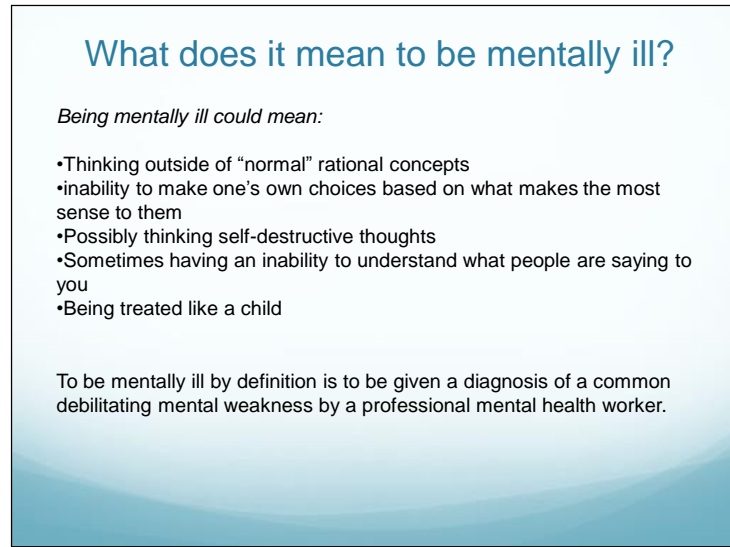
A presentation slide with a light blue background and a darker blue wavy pattern at the bottom. The title 'Ask Yourself...' is centered at the top in a blue font. Below it is a question in black text.

**Ask Yourself...**

What do you think of when you hear the term  
Mentally ill ?

I would like for you all to take a minute to note what comes to your mind when you first hear the term ‘mentally ill?’ \*pause for a few seconds\* - I want you now to spend 3 minutes comparing your thoughts with those of your neighbor.

## Slide 5

A presentation slide with a light blue background and a darker blue gradient at the bottom. The title 'What does it mean to be mentally ill?' is in a bold, dark blue font. Below the title, the text 'Being mentally ill could mean:' is in a smaller, italicized font. This is followed by a bulleted list of five points. At the bottom, a paragraph defines being mentally ill by definition.

**What does it mean to be mentally ill?**

*Being mentally ill could mean:*

- Thinking outside of “normal” rational concepts
- inability to make one’s own choices based on what makes the most sense to them
- Possibly thinking self-destructive thoughts
- Sometimes having an inability to understand what people are saying to you
- Being treated like a child

To be mentally ill by definition is to be given a diagnosis of a common debilitating mental weakness by a professional mental health worker.

What does it mean to be mentally ill? We all have mental weaknesses, areas in our lives in which we are, admittedly, irrational and difficult to deal with. And at times we, do things that others are uncomfortable with, or possibly even something we know to be dangerous, just because it makes sense to us. Even though it makes sense to no one else.

*Being mentally ill could mean:*

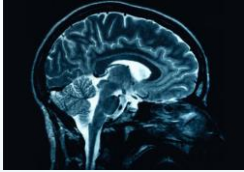
- Thinking outside of “normal” rational concepts, causing you not to participate in a normal life.
- For a portion of one’s life, it is the inability to make one’s own choices based on what makes the most sense to them.
- Possibly thinking self-destructive thoughts or do things that are self-destructive.
- Sometimes having an inability to understand what people are saying to you and not being able to control your own behavior.
- Having others be exasperated with you or treating you like a child.

To be mentally ill by definition, however, is to be given a diagnosis of a common debilitating mental weakness by a professional mental health worker.

## Slide 6

### What is mental illness?

Mental illness – is a medical condition that causes disturbances in thoughts and feelings and impacts a person's daily functioning, and ability to relate to others.



A mental illness is defined as a medical condition that causes disturbances in thoughts and feelings impacting a person's ability to carry out activities of daily living and to relate with others.

## Slide 7

### What is stigma?

- A mark historically used to identify slaves
- Mark of disgrace which distracts from the character of the person (Goffman, 1963)
- The use of negative labels to describe and devalue somebody
- *"a process whereby certain individuals and groups are unjustly rendered shameful, excluded and discriminated against"*. (WHO, 2002)
- Mental illness is stigmatised in our culture whereby it is regarded as being socially unacceptable or shameful
- This negative stereotyping and discrimination prevents individuals and their relatives from seeking help when they need it

Now that we know what a mental illness is the next key term to define for the purpose of this discussion is stigma.

The term stigma, the plural of which is stigmata, was originally used to describe a dot or mark left on the skin after stinging with a sharp instrument, sometimes used to identify slaves

Historically, the term stigma dates back to 1963 when Erving Goffman a leading sociologist defined it as a “mark of disgrace which distracts from the character of the person”

According to the WHO, Stigma is a *“a process whereby certain individuals and groups are unjustly rendered shameful, excluded and discriminated against”*. (WHO, 2002)

Stigma is more commonly understood in lay terms as the use of negative labels to describe and devalue somebody. With respect to our discussion, that somebody is the individual suffering from a mental illness (also referred to as a service user) and/ or his relatives and caregivers.

Mental illness has been negatively portrayed by media and other mechanisms in our culture as being socially unacceptable or shameful. It has driven many of the general public to fear, reject, and develop stigmatising negative attitudes, beliefs, thoughts and behaviours toward sufferers of mental illness. For instance, mental illness is not widely considered as other illnesses, such as cancer, as being something which affects part of a person - which can then be treated. But it is instead regarded as an illness that affects all of the person that damages their character and the sort of person they are.

Negative use of labels, stereotyping and discrimination prevents service users from seeking the help they need when they need it. As a matter of fact, many people with mental illnesses are subjected to severe disadvantages in most areas of their lives as a result of the stigma they experienced from relatives, friends, neighbours and/or in the workplace. Service users themselves have often described dealing with the stigma of a mental illness as being worse to deal with than coping with the symptoms of the illness itself.

## Slide 8

**What do all these terms have in common?**

- Crazy
- Nuts
- Psycho
- Mad
- Insane
- Weirdo
- Retard
- Majnoon
- Khabal
- Mutakhalif
- Mukhtal 3agleeyan
- Nutjob
- Loony
- Schizo

Looking at the following words: Crazy, Psycho, Schizo, Majnoon (Arabic word for crazy), khabal (Arabic word for mental), mutakhalif (Arabic word for retarded) etc... What do they all have in common? \*Pause for a few seconds\*

They are all insulting and discriminating labels commonly used to describe people suffering from mental illness!

## Slide 9

Components of stigma		
Link & Phelan 2004	Corrigan & Watson 2002	Thornicroft 2006
Labelling		
Stereotyping	Stereotype	Ignorance (Problem of knowledge )
Separating		
Emotional reactions	Prejudice	Prejudice (Problem of attitudes )
Status loss + Discrimination		
Dependence of Stigma on Power	Discrimination	Discrimination (Problem of behaviour)

Pioneer researchers in the field of stigma research, have proposed stigma to compose of different components.

One way of looking at stigma is as a problem consisting of 3 elements:

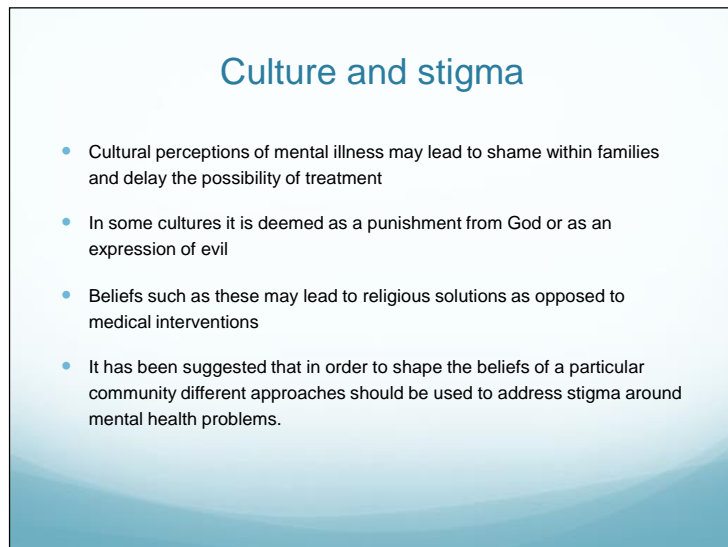
Firstly, a problem of knowledge namely that many people are both very ignorant and misinformed about mental illnesses and their treatments

Secondly, a problem of attitudes almost predominantly negative attitudes or preconceived opinions that are not based on reason or actual experience are held towards people with mental illnesses and this is known as prejudice.

Thirdly, a problem of behaviour namely discrimination which is the unjust treatment of different categories of people; especially on the grounds of race, sex or age

Of the three, I would believe discrimination to be the more important in limiting the every day lives of people with a mental illness

#### **Slide 10**



### Culture and stigma

- Cultural perceptions of mental illness may lead to shame within families and delay the possibility of treatment
- In some cultures it is deemed as a punishment from God or as an expression of evil
- Beliefs such as these may lead to religious solutions as opposed to medical interventions
- It has been suggested that in order to shape the beliefs of a particular community different approaches should be used to address stigma around mental health problems.

As mentioned earlier, cultural perceptions of mental illness may lead to shame within families and delay the possibility of treatment. Shame is so strong in some communities that family members keep mental health problems a secret and care for the individual in isolation. In some cases treatment is not even sought for fear family reputation may be affected (Mosaics of Meaning 2007) . Moreover, some cultures may not perceive mental health problems as an illness but rather as a punishment from God or as an expression of evil (e.g. black magic and evil spirits), and in turn may seek and or rely

solely on religious and faith-based beliefs as opposed to medical solutions which in turn can have serious implications for treatment and overall recovery rate.

Mental health service providers have to bear in mind that in order to shape the beliefs of a particular community different approaches should be used to address stigma around mental health problems. This needs to be based around a shared understanding of different values & beliefs that exist between varying cultures.

## Slide 11

**Islamic stance on stigmatisation**

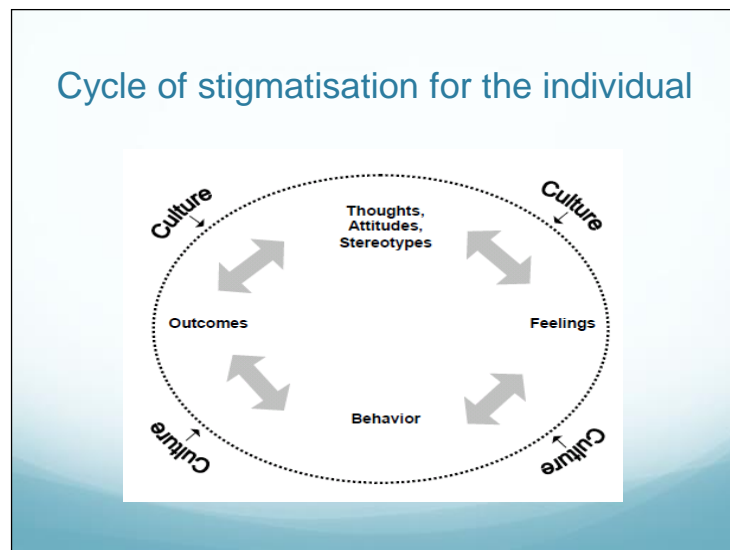
يَا أَيُّهَا الَّذِينَ آمَنُوا لَا يَسْخَرُ قَوْمٌ مِنْ قَوْمٍ عَسَىٰ أَنْ يَكُونُوا خَيْرًا مِنْهُمْ  
وَلَا نِسَاءٌ مِنْ نِسَاءٍ عَسَىٰ أَنْ يَكُنَّ خَيْرًا مِنْهُنَّ وَلَا تَلْمِزُوا أَنْفُسَكُمْ وَلَا  
تَنَابَزُوا بِالْأَلْقَابِ بِئْسَ الْأَسْمَاءُ الْقُصُوفُ بَعْدَ الْإِيمَانِ وَمَنْ لَمْ يَتُبْ  
فَأُولَٰئِكَ هُمُ الظَّالِمُونَ ﴿١١﴾

"O you who have believe! Let not a group of people ridicule at another group of people; perhaps they may be better than them; nor let (some) women ridicule other women; perhaps they may be better than them. And do not insult one another and do not call each other by [offensive] nicknames. Wretched is the name of disobedience after [one's] faith. And whoever does not repent - then it is those who are the wrongdoers."

(Surrah Al-Hujrat, 49, Verse: 11)

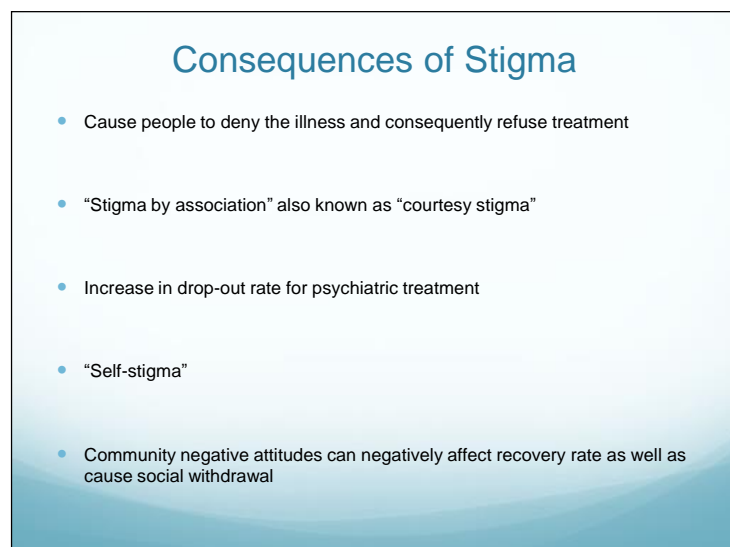
Although in some cultures and religions mental illness is deemed as a punishment from God or as an expression of evil, stigma is not justifiable from an Islamic point of view the holy Quran condemns stigmatisation and or discrimination as mentioned in verse 11 of surrah al Hujrat.

## Slide 12



Now let's step back and put together what we have covered so far. We have explained how culture can influence knowledge, attitudes and behaviour in turn generating hostile feelings which trigger negative behaviour and lead to stigmatising outcomes.

## Slide 13

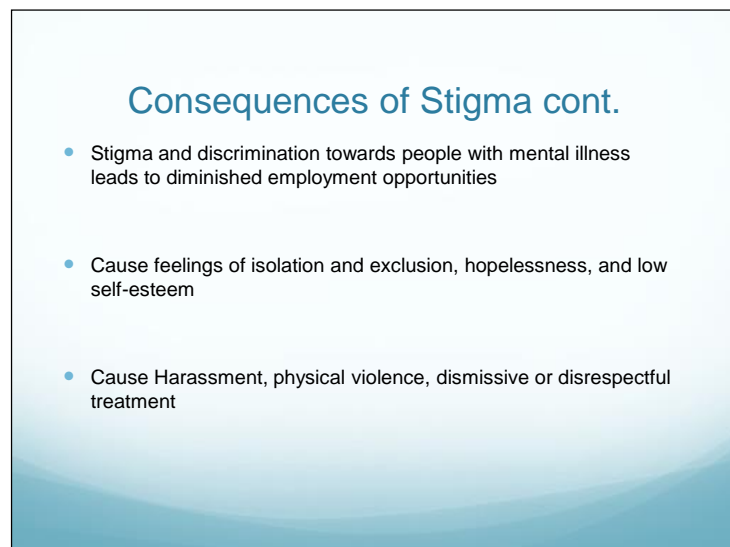


- Stigma can cause people to deny the illness as they are more reluctant to seek help at an early, more treatable stage of illness and consequently refuse treatment altogether. In fact statistics show that only 1/3 of those needing treatment seek it due to fear of discrimination



- The stigma of mental illness is often extended to others in a term known as “stigma by association or courtesy stigma”. Mental health professionals hold a diminished status in the eyes of other health care professionals which makes recruitment challenging. When it comes to family of service users (e.g. fear of not being able to marry) or they may even be ‘blamed’ for the emergence of mental illness as though they were responsible for its causation
- Stigma increases the drop-out rate for psychiatric treatment because people do not want to be seen attending psychiatric clinics
- People with mental illness often hold the same beliefs as society at large and internalize those beliefs, blaming themselves for their illness a term called “self-stigma”
- Community attitudes can negatively affect recovery rate as well as cause social withdrawal. Service users expect to be rejected by the community and, therefore, are reluctant to engage with others. The effects of stigma and its resultant social withdrawal may have a greater impact on an individual than the illness itself.

## Slide 14



**Consequences of Stigma cont.**

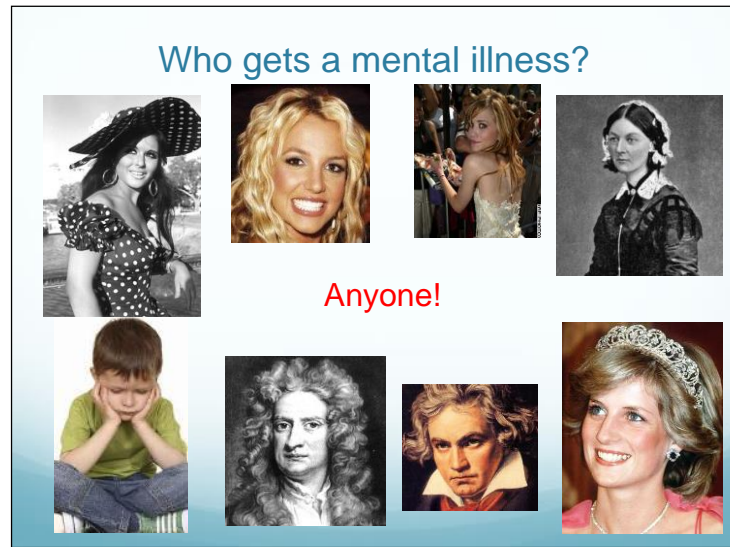
- Stigma and discrimination towards people with mental illness leads to diminished employment opportunities
- Cause feelings of isolation and exclusion, hopelessness, and low self-esteem
- Cause Harassment, physical violence, dismissive or disrespectful treatment

- Stigma and discrimination towards people with mental illness leads to diminished employment opportunities, lack of career advancement, hostility in

the workplace while contributing to the persistent under-funding of research and treatment services

- Cause feelings of isolation and exclusion, hopelessness, and low self-esteem
- Cause Harassment, physical violence, dismissive or disrespectful treatment

### Slide 15



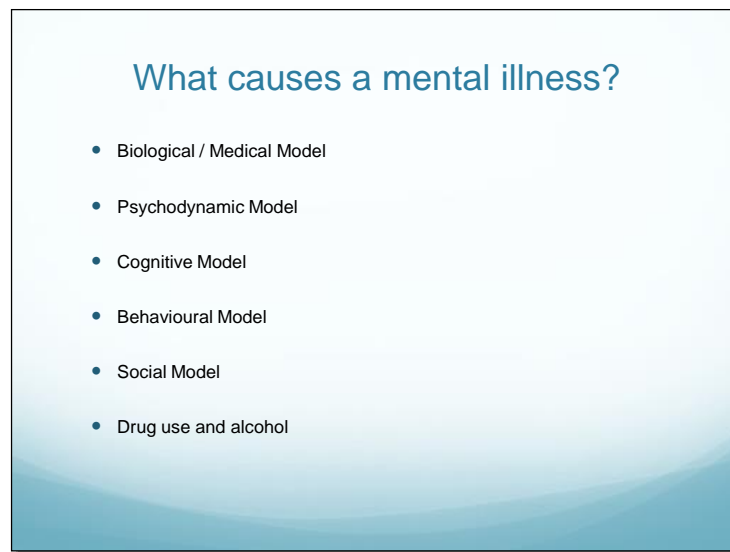
Who gets a mental illness? \*pause for a few seconds\*

Anyone! male or female, of any social status, age and of any ethnicity or religion.  
including famous and successful people like the people who are featured on this slide.

do you recognise any of the people here? do you know what mental illness they suffered from? (bit of classroom discussion with the student group)

the point I am trying to make is that people who are mentally ill are not different to us – they are just like us – indeed it is likely that one in four people in this room will suffer from mental illness at some time in their lifetime.

## Slide 16



So let's move on to discuss what causes a mental illness? The answer is that there is not one identifiable cause for mental illness, rather many theories exist that likely operate together.

Such as:

The Biological / Medical Model which proposes that it is a problem related to brain chemistry, perhaps an imbalance in hormones or genetic predispositions.

On the other hand the Psychodynamic Model implies that mental illness is a result of Psychological trauma or significant life events.

The Cognitive Model indicates that maladaptive thought processing and previous life experiences are the culprit.

However the Behavioural Model suggests that certain Learning behaviours through reward, punishment, associations and social observations might be the cause.

The Social Model considers the Environment, family, media, community, unemployment, inequality, poverty and other social issues to be related. Finally, Drug use and alcohol have also been shown to increase the risk of developing mental illness.

## Slide 17

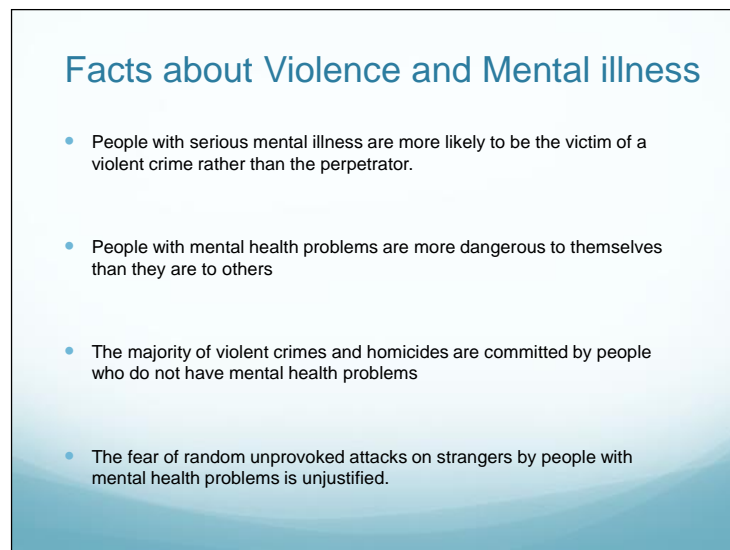
### Facts and statistics about mental illness

- Mental illness affects children as well as adults  $\frac{3}{4}$ 's of all chronic mental illnesses start by age 24 (NIMH, 2005)
- **1 in 4 people** will experience some kind of mental health problem per year. (The Office for National Statistics Psychiatric Morbidity report, 2001)
- It is estimated that approximately **450 million people worldwide** have a mental health problem. (WHO, 2001)
- Suffers of mental illness are at a higher risk of violence than the general population
- 70% of people with a mental illness reported they experienced stigma in the last year
- 16% reported stigma in the workplace
- 13% from staff in a health service (SANE, 2006)
- The elderly experience double stigma

Next I would like to cover with you a few facts about mental illness:

- Mental illness affects children as well as adults. Statistics show that more than 50% of all chronic mental illnesses start by age 14
- According to the National Comorbidity Survey, funded by the National Institute of Mental Health,  $\frac{3}{4}$ 's of all chronic mental illnesses start by age 24 (2005)
- The Office for National Statistics Psychiatric Morbidity report that **1 in 4 people** will experience some kind of mental health problem per year. (2001)
- The world health organisation has estimated that approximately **450 million people worldwide** have a mental health problem. (WHO, 2001)
- Suffers of mental illness are at a higher risk of violence than the general population, where they are more likely to be the victims of violence rather than commit violence
- 70% of people with a mental illness reported they experienced stigma in the last year
- 16% of service users reported stigma in the workplace
- 13% reported it from staff in a health service (SANE, Australia, 2006)
- The elderly experience the double stigma of being old and mentally ill and are less likely to seek help; their illnesses may not be detected because of the belief that anxiety and depression are a normal part of aging

## Slide 18



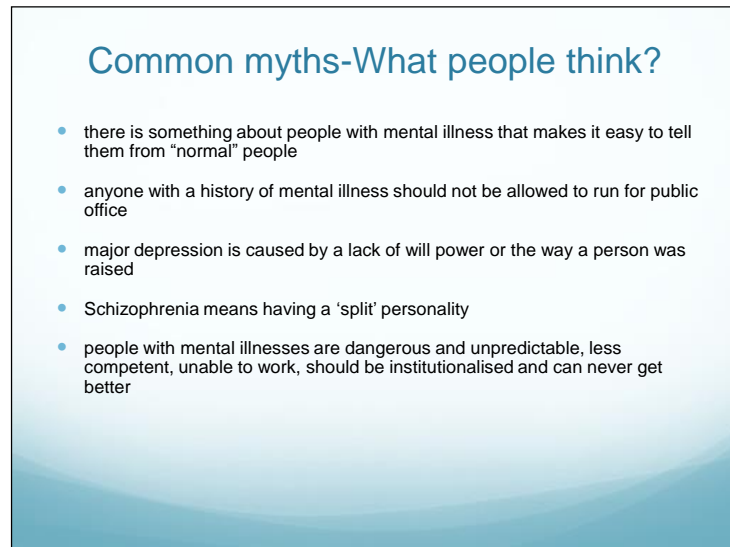
### Facts about Violence and Mental illness

- People with serious mental illness are more likely to be the victim of a violent crime rather than the perpetrator.
- People with mental health problems are more dangerous to themselves than they are to others
- The majority of violent crimes and homicides are committed by people who do not have mental health problems
- The fear of random unprovoked attacks on strangers by people with mental health problems is unjustified.

perhaps one of the main reasons why people with some mental illnesses suffer from stigma is that there is a widespread perception that they are violent and so dangerous how far is this true? let's look at a few facts about violence and mental illness:

- People with serious mental illness are more likely to be the victim of a violent crime rather than the perpetrator or doer. A study found that more than one in four people with a severe mental illness had been a victim of crime in one year.
- People with mental health problems are more dangerous to themselves than they are to others: 90 per cent of people who die through suicide in the UK are experiencing mental distress.
- The majority of violent crimes and homicides are committed by people who do not have mental health problems. In fact, 95 per cent of homicides are committed by people who have not been diagnosed with a mental health problem.
- The fear of random unprovoked attacks on strangers by people with mental health problems is unjustified. This has been highlighted by a US finding that patients with psychosis who are living in the community are 14 times more likely to be the victims of a violent crime than to be arrested for such a crime.

## Slide 19



### Common myths-What people think?

- there is something about people with mental illness that makes it easy to tell them from “normal” people
- anyone with a history of mental illness should not be allowed to run for public office
- major depression is caused by a lack of will power or the way a person was raised
- Schizophrenia means having a 'split' personality
- people with mental illnesses are dangerous and unpredictable, less competent, unable to work, should be institutionalised and can never get better

Looking at Common myths about mental illness- what do people actually think?

- there is something about people with mental illness that makes it easy to tell them from “normal” people

WELL WE HAVE JUST SEEN THAT PEOPLE LIKE YOU AND ME CAN SUFFER FROM MENTAL ILLNESS AND THAT FAMOUS AND VERY SUCCESSFUL PEOPLE CAN TOO – SO in fact you can’t tell them apart from the crowd.

-anyone with a history of mental illness should not be allowed to run for public office or be in any other leading work position for that matter

WELL, THAT WOULD EXCLUDE ABRAHAM LINCOLN, WINSTON CHURCHILL....ETC all of whom were leading political figures who happened to suffer from a mental illness as well.

-major depression is caused by a lack of will power or the way a person was raised.

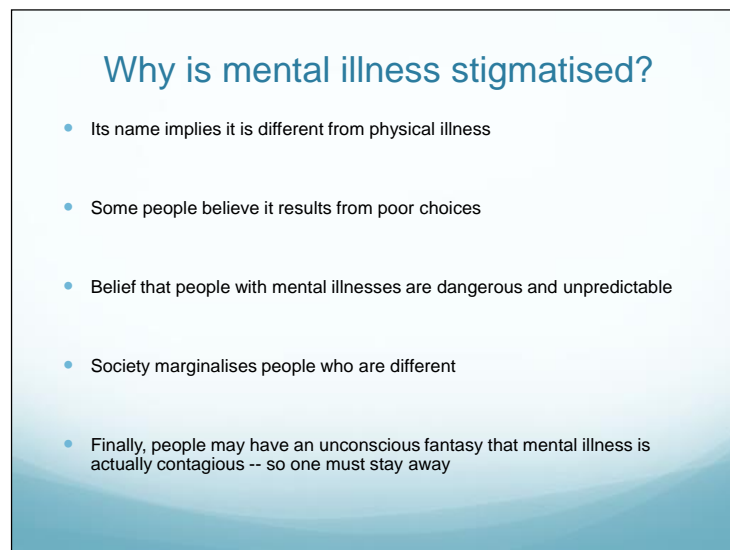
Depression has nothing to do with being lazy or weak or the way a person was brought up. It results from changes in brain chemistry or brain function and it often takes medication and/or psychotherapy to help recover

- people with mental illnesses are dangerous and unpredictable, less competent, unable to work, should be institutionalised and can never get better

Research indicates that people receiving treatment for a mental illness are no more violent or dangerous than the general population. In fact they are the ones more likely to be the victims of violence rather than the committers of it.

The fact that many of these ideas still commonly prevail amongst the general public is an indication that the factual understanding of mental illnesses among most members of the general population is still very weak.

## Slide 20



Why is mental illness stigmatised?

- Its name implies it is different from physical illness
- Some people believe it results from poor choices
- Belief that people with mental illnesses are dangerous and unpredictable
- Society marginalises people who are different
- Finally, people may have an unconscious fantasy that mental illness is actually contagious -- so one must stay away

Now that we have determined that stigma to mental illness has devastating and grave consequences...we should ask why mental illness is stigmatised? Some possible reasons are:

- Its name implies it is different from physical illness as it sounds as if it is “all in one’s head”
- Ignorance among some people drive them to believe it results from poor personal choices and that the individual is to be blamed for his illness
- False beliefs that service users are dangerous and unpredictable
- Or perhaps because society always marginalizes people who are different.
- Finally, misconceptions that people with mental illness may actually be contagious -- so one must stay away

## Slide 21

### Issues & key features of stigma research

Family, Society, Employment, Culture and Media...

What do these have in common?

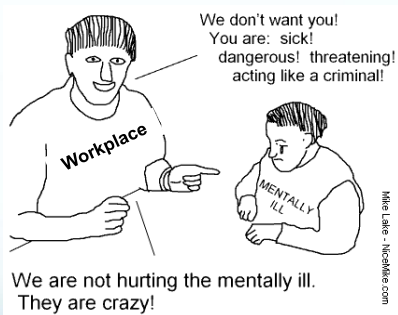
Let's address some of the key features of stigma research in relation to mental illness.  
Family, society, employment, culture and media... what do they all have in common?

- Focus on violence
- Mostly only address schizophrenia
- They pay Little attention to emotions
- They provide Little information on actual discrimination
- Only a Few reports actually come from service users
- And of all the research out there, only a Few intervention studies exist

## Slide 22

### Discrimination at Work

- Lower rates of hiring
- More often fired
- Lower rates of pay
- Poorer promotion prospects
- Dilemma: conceal or disclose
- 47% of people have experienced discrimination in the workplace



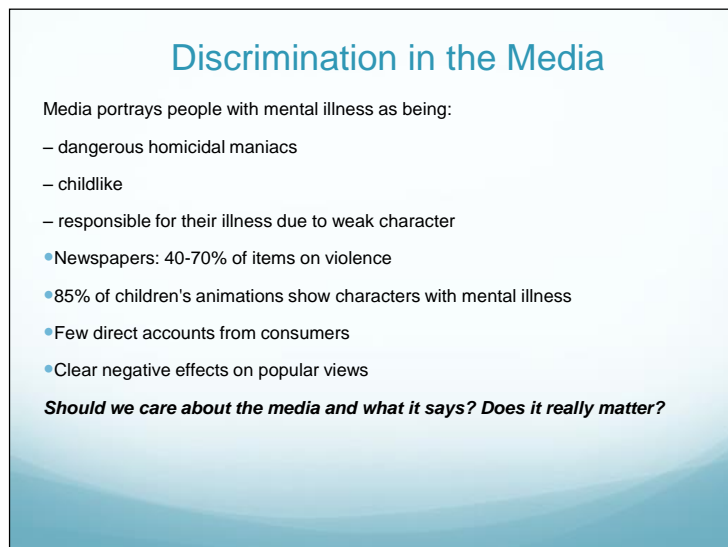
The cartoon shows a man in a shirt labeled 'Workplace' pointing at a man in a shirt labeled 'MENTALLY ILL'. The man in the 'MENTALLY ILL' shirt is slumped over a desk. Speech bubbles from the 'Workplace' man say: 'We don't want you!', 'You are: sick!', 'dangerous! threatening!', and 'acting like a criminal!'. A separate speech bubble at the bottom says: 'We are not hurting the mentally ill. They are crazy!'. The cartoon is signed 'Mike Latta - NickMiles.com'.



When addressing what research on Discrimination at the workplace can show us

- It becomes Apparent that there are Lower rates of short-listing for those with a mental illness
- In fact they are more than likely to get fired rather than hired
- Studies also reveal, Lower rates of pay and poorer promotion prospects
- This often leaves service users facing the dilemma of whether they should conceal or disclose their illness. According to a UK statistic, 52% of people have concealed their Mental health history for fear of losing their jobs (MIND, 1996) and probably for a good reason as a another statistic points out that 47% of people with a mental illness have experienced discrimination in the workplace (MHF, 2000)

### Slide 23



**Discrimination in the Media**

Media portrays people with mental illness as being:

- dangerous homicidal maniacs
- childlike
- responsible for their illness due to weak character

- Newspapers: 40-70% of items on violence
- 85% of children's animations show characters with mental illness
- Few direct accounts from consumers
- Clear negative effects on popular views

***Should we care about the media and what it says? Does it really matter?***

Common myths about mental illness among people are so popular no thanks to the media which tends to portray people with mental illnesses as being:

- Dangerous homicidal maniacs who need to be feared
- Having childlike perceptions of the world or need to be taken care of,
- Are irresponsible and unpredictable

Or

- Are responsible for their illness due to weak character and should be blamed

Studies have shown that

- 40-70% of Newspapers focus on items of violence

- 85% of cartoons such as Looney toons, show characters with mental illness
- Few direct accounts factually exist from service users
- And that media Can clearly negatively affect popular views

The reason behind such findings is that Newspapers and TV stations can print or broadcast statements about those with mental illness that would not be tolerated if they were said about any other minority group. Stigma insinuates itself into policy decisions, access to care, health insurance, employment discrimination, and in research allocation and priorities.


So why should we care about what the media says? Does it really matter? The answer is yes.

We already mentioned how media can have a powerful influence on popular beliefs. Journalists hold powerful positions because via their, Media wide route of communication they can reinforce negative views through coverage, which can in turn lead to public fear (Stuart 2006) strongly influencing public's understanding and reactions to people with mental health problems (Philo 1996; Thornicroft 2006)

## Slide 24

### Discrimination at Home

- Adverse reactions by family
- High rates of homelessness
- Neighbourhood protests towards residential care



Research on discrimination at home towards those with a mental illness have displayed

- Adverse reactions of family members. for example calling them weak or lazy or just asking them to snap out of it already

- Studies have also shown a high rate of homelessness and neighbourhood protests towards residential care. This picture shows child protestors outside a former old age people's home joining the protest against turning it into a rehabilitation unit for people with mental illness.

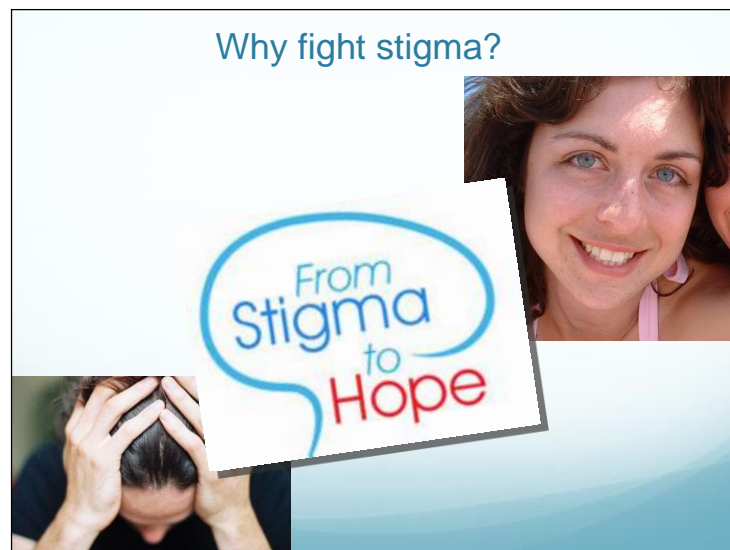
## Slide 25



Although little is known in Research on Discrimination in friendships, intimate relationships and childcare there is evidence that suggests having a mental illness can increase the risk of a divorce or separation of an intimate partner, husband or wife. Another serious risk faced particularly by women with more severely disabling mental illnesses is of sexual coercion or abuse

- As is the sudden disappearance of friends. People with more severe forms of mental illness have smaller social networks than others, have relatively more family members than friends in their social circle and have relationships that are more dependant rather than independent.
- Losing custody of a child is more common for parents with a mental illness. Despite the presence of little evidence that suggests parents with a mental illness can not raise a child. Another consequence of mental illness is that other family members may see the person as incompetent to share normal family childcare responsibilities both on an informal day-to-day basis , and also in longer-term formal ways.

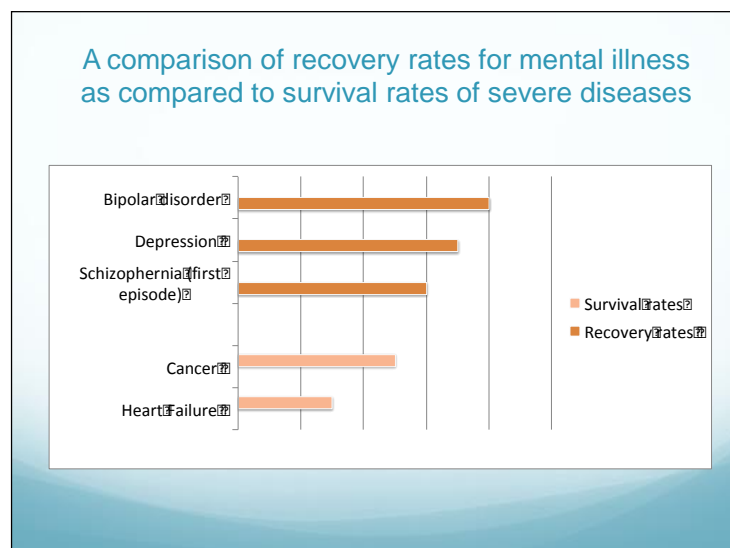
## Slide 26



Moving on to the topic of Stigma and recovery, I ask why bother fighting stigma? The answer is simple.

There is hope! People with mental illness CAN and DO recover entirely and go back to resuming their daily lifestyles.

## Slide 27



The following bar chart proves that the average recovery rates for mental illnesses such as: Bipolar Disorder, Depression and First episode Schizophrenia are 80, 70 and 60%

respectively and are generally higher as compared to the **survival rates of severe diseases such as Cancer and Heart failure which are 50 and 30%**

## Slide 28



Using Maslow's pyramid as an interpretation of basic human needs we can illustrate that all humans need to be respected, to have self-esteem, self-respect etc...

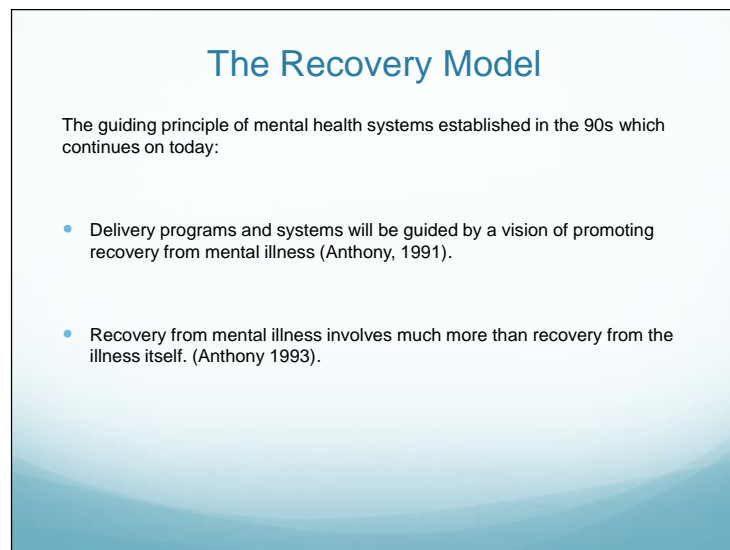
Maslow emphasized the importance of self-actualization, which is a process of growing and developing as a person to achieve individual potential.

Stigma and discrimination to mental illness strips those suffering from a mental illness from their basic needs leaving them feeling vulnerable and prone to suicide.

Today, suicide is the third leading cause of death. Studies indicate that more than 90 percent of suicide victims have a diagnosable psychiatric illness and that suicide is the most common cause of death for people with schizophrenia

Without stigma, people with mental illness will be accepted and perhaps feel more comfortable reaching out for help if they understood their symptoms rather than felt the need to hide them and if they knew that they were capable of achieving a full recovery. Currently the dropout rate for psychiatric treatment is high because people do not want to be seen attending psychiatric clinics. Moreover, people with mental illness often hold the same beliefs as society at large and blame themselves for their illness

## Slide 29



### The Recovery Model

The guiding principle of mental health systems established in the 90s which continues on today:

- Delivery programs and systems will be guided by a vision of promoting recovery from mental illness (Anthony, 1991).
- Recovery from mental illness involves much more than recovery from the illness itself. (Anthony 1993).

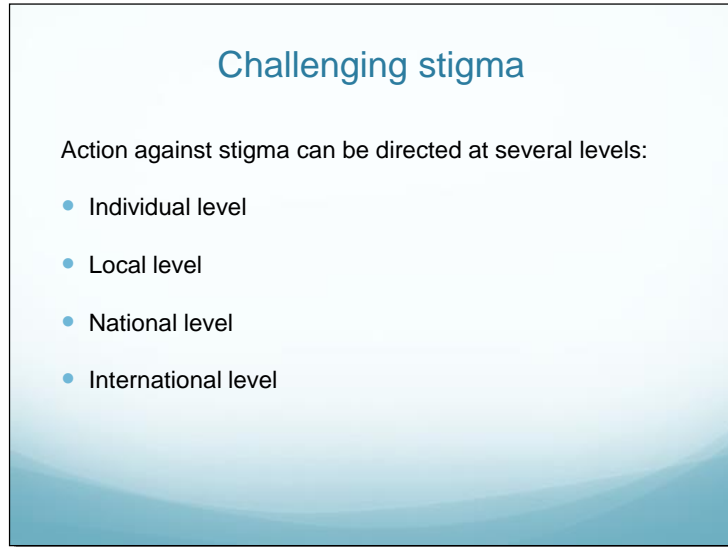
The recovery model depicts that mental Health Initiatives dating back to the 80s and with the expansion of community based treatment has its emphasis on treating the consequences of the illness rather than just the illness per se.

Repper & Perkins (2003) explained how ‘Recovery was not just about getting rid of problems.. but about recovering people’s social roles and relationships that give life value and meaning’

Does that make sense? \*pause for a few seconds\*

So people do not necessary ‘get rid’ of their problems therefore it is far more important to help people regain, re-connect with things that are important to them, make them feel valued as a way of recovery and coping.

## Slide 30



### Challenging stigma

Action against stigma can be directed at several levels:

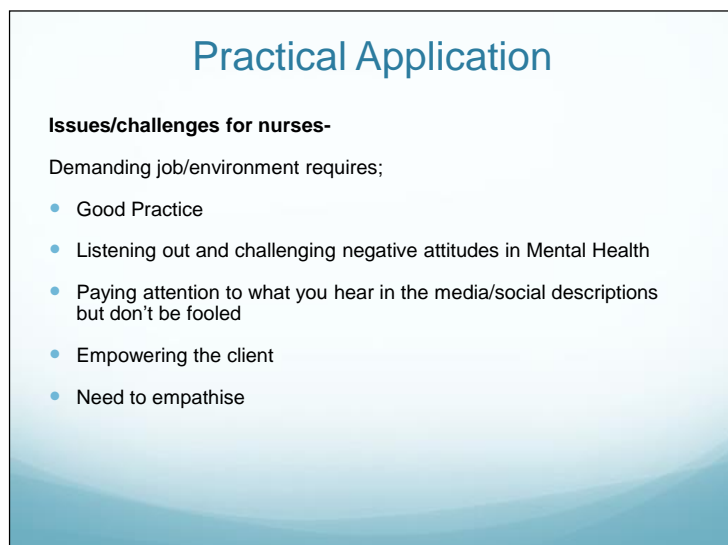
- Individual level
- Local level
- National level
- International level

That means that although there is no reason that stigma should exist, there are ways to challenge, cope and even prevent stigma related to mental illness.

Action against stigma can be taken by healthcare staff, service users themselves, their families and can be directed at several levels:

- On an individual level to those who have a mental illness and their families
- on a local level such as neighborhood initiatives
- on a national level such as developing and using disability discrimination laws
- And on an international level

## Slide 31



### Practical Application

**Issues/challenges for nurses-**

Demanding job/environment requires;

- Good Practice
- Listening out and challenging negative attitudes in Mental Health
- Paying attention to what you hear in the media/social descriptions but don't be fooled
- Empowering the client
- Need to empathise

Looking at the practical application, Psychiatric nurses continue to expand their role in delivery of mental health care, so that it is less medically led, and we have the potential for continued growth and the ability to positively affect mental health care.

However there are many **Issues and challenges for nurses as it is a** demanding job/environment which requires that

- You may have to deal with some challenging behaviour in mental health field but as professionals you supersede prejudiced judgement and should be equipped with necessary knowledge and skills in order to deal with any given situation in a non-judgemental/professional manner.
- Good Practice- listen out for some of the issues covered today as you go about your placements.
- Challenge negative attitudes in Mental Health
- Pay attention to what you hear in the media/social descriptions but don't be fooled, be aware of how it affects attitudes/beliefs of those around you

**Nurses provide front line support to people with mental health issues.**

Form a therapeutic relationship with the mental health patient, and their family. It is therefore vital to have a good understanding of the theories of mental health and illness, and to be assisted with the most up to date information and research in order to aid recovery and promote independent living skills. (BJM 2009)

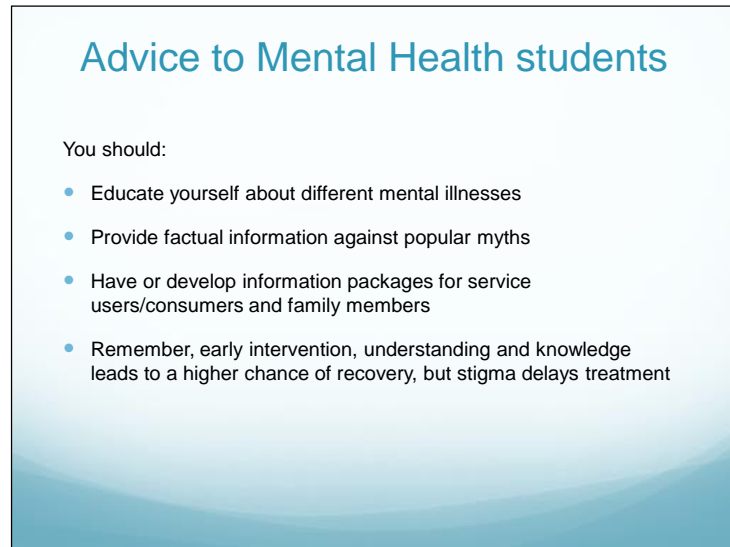
LISTEN OUT- If professionals are prepared to describe individual patients in derogatory or demeaning and misleading terms, this is likely to affect the kind of care that they give.

As qualified nurses you will be in privileged positions to EMPOWER THE CLIENT Need to EMPATHISE. Your main tool as a nurse will be the strength of your own personality and communication skills so work on developing these over the course of your training (that's general nurses included) Too many general nurses say they are 'afraid' or don't know what to do when seeing with somebody suffering with their



mental illness- learn empathy with people you are dealing with and show warmth and care. And IF YOU DON'T KNOW how- ASK SOMEONE WHO DOES-

### Slide 32



Combating stigma and helping individuals and their families is a key part of the job you are training for

The nurse-patient relation is a complex power relationship and a position to make a difference therefore you should

- Educate yourself about different mental illnesses so you understand them better and can therefore actively provide factual information against popular myths
- Have information packages for service users/consumers and family members that explain causes, nature, treatments and prognoses of different types of mental illness
- And remember, Early intervention, understanding and knowledge leads to a higher chance of recovery, but stigma delays treatment

## Slide 33

### Conclusion

- People who suffer a mental illness need support and assistance in reconnecting with the community and re-gaining their self-esteem
- Negative perceptions are not helpful and serve to isolate and adversely affect recovery
- Behaviours associated with psychiatric symptoms may be interpreted negatively
- What we see/hear affects our emotional reaction, which in turn affects our behavioural responses

## Appendix 13: Interview schedule

Florence Nightingale School of Nursing  
& Midwifery, King's College London

### INTERVIEW SCHEDULE



#### Welcome and Introduction

*[Shake hands]*

Welcome. My name is Loujain Sharif and I am a researcher from King's College London conducting research on educational training in Nursing and Mental Illness. I would first like to thank you for taking part in the study and attending this interview. The study you participated in was assessing differing educational interventions in the mental health field. I am going to ask you some questions about your experience of the intervention you received and about your clinical placement. I am interested in your thoughts and opinions, there are no correct or incorrect answers so please feel free to answer as openly and honestly as possible.

#### Aim of the study

The aim of the study is to determine the effectiveness of two different types of educational interventions on student attitudes to patients experiencing mental illnesses.

#### Confidentiality

Your answers will be treated with confidentiality. I'm going to be making notes during the interview, However I would also like to use a voice recorder so that I make sure I don't miss anything. All the data will be anonymised for analysis. Please note that the only people who will listen to this interview will be me and possibly my supervisor at King's College London and that following transcription the tape will be wiped clean. Is it okay to record the interview? The interview should take about 20 minutes.

### **Questions on educational intervention**

- Let me begin by asking you about your experience of the educational intervention you were allocated to. What were your thoughts about it?
- Can you please tell me how the educational intervention has affected the way you view people with a mental illness?

### **Questions on Clinical Placement**

- Please describe your clinical placement experience. Making use of a specific incident.
- Thinking back to your clinical placement, how has it affected the way you view individuals with a mental illness?

### **Summary:**

Well, it has been a pleasure finding out more about your experience of our intervention and your clinical placement. Let me briefly summarise the information that I have recorded during our interview.

### **Conclusion:**

I appreciate the time you took for this interview. Is there anything else you would like to add or think would be helpful for me to know that I haven't already asked you about?

I should have all the information I need though would it be all right to get your contact details should I have any more questions? Thanks again.

**Name:**

**Email:**

**Telephone number:**

*[Shake hands]*

## Appendix 14: Sample of the coded interviewee responses

Tables 1 – 8 below list the coded statements used to derive themes 1-8.

**Table 1: Theme 1 (Raised awareness – challenging perceptions and beliefs)**

Coded	Responses
Remembered content	P 86: I remember I attended a video with patients that talked about their experiences of stigma.
Remembered content	P 95: Yes, we took a little in the course (educational intervention) about that. The mentally ill patient faces a lot of stigma as well as his family. I mean, maybe his family face even more [stigma] than the patient himself.
Remembered content	P 70: Uhhm, I remember that the patients were talking about themselves. About how “we are normal people” and “we can live independently”. Uhhm, and they were trying to change society’s view of them and such.”
Remembered content	P 87: It was...most of the mentally ill were saying they were normal people and that they could live. It was about mental illness.
Remembered content	P 83: ... no one comes to visit them [patients] in the hospital. No one knows about them and no one...their families...there are a lot of patients who were in the hospital, their families didn’t visit them and even if you called them, they [family] didn’t want them [patients], I mean. So I felt that most of all...proved there was strong stigma against people with mental illness, I mean.
Remembered content  Effect of material	<p>P 86: Well, after attending the video, I realised just how much stigma these patients are facing and so as a nurse I have to always have this in my mind when I deal with them [psychiatric patients]. When I went into clinical and dealt with the patients and heard their stories I saw the same types of stigma that were talked about on the video. This made me feel the need to be aware of the stigma they face so that I am careful when dealing with them [patients] so that I don’t make them feel like...how do should I tell you...so I don’t make them feel like they are indeed something wrong because they already feel stigmatised.</p> <p>P 86: Yeeees. That’s right. So I have to say watching the video of course helped me in the clinical and taught me how to deal with them [psychiatric patients] as equals.</p>

Coded	Responses
Effect of material	<p>P 90: ... when I used to see a mentally ill patient, I would feel abnormal fear. And didn't know how to deal with him [patient].</p> <p>P 90: After I attended the lecture, by chance if I saw someone in the street who was mentally ill, or anywhere, before I would be afraid and I don't know what to do and I couldn't go near him or pass by the place where he was. But now, it's become very normal, like it's nothing. It's become normal for me. Even if I see that he is in an agitated condition and aggressive and such that everyone is looking, it's the opposite, it's normal, I mean. Maybe it was the lecture and how it said people with mental illness are more likely to hurt themselves than others or maybe because we went and mixed with them during clinical placement and sat in the same place so I feel it's really normal, I mean.</p>
Effect of material	<p>P 97: ... This course [educational intervention ] really changed me...it made me a better person because a lot of things that I used to hear about people with mental health problems were myths they weren't true even when I studied the theory part of it. It isn't like going to the clinical area because I saw it live. I saw that these patients, they really need us. So it made me feel real thankful and realise all the blessings I have and take for granted. Like I never really realised, but I was one of those people who would call mental patients retarded or whatever because I was ignorant. I didn't know the symptoms they go through, or the different diseases and after taking that course I looked at such matters differently.</p>
Effect of material	<p>P 95: Yes, so I really felt like she [the patient], mentioned something that we have here in our community. Something we really suffer from. So she corrected misconceptions, like that. I mean like me for instance you saw how in the beginning I was afraid and having negative views about them [people with mental illness] and such. So I started to feel a little sorry for them...and question myself "what's wrong with me?" I mean the stigma they get from their family is bad enough they don't need me to stigmatise them too.</p> <p>P 95: So I started to think a little that they [psychiatric patients] are, I mean, human beings like me.</p>
Effect of material	<p>P 87: I felt that sometimes we could sympathise with them [psychiatric patients] in that sometimes they...I mean, mental illness is a disease like any other. I mean, with treatment then the patient can improve and live his life normally.</p>
Effect of material	<p>P 83: ... I remember most of all a sentence, like a statement that I remember until now: That they [psychiatric patients] are victims of others more than they hurt others. That is the sentence that most of all, I felt, that I saw in reality. I didn't know that before.</p>

Coded	Responses
Effect of material	P 70: It [educational intervention] changed my view, I mean, there were some patients who recovered and went on to live their lives normally. They [patients] are taking their medication and their lives are stable, I mean. And they depended on themselves for everything and they worked and lived their lives. So, I don't know, it made me see that...umm...they...if they were treated and cared for properly they can live a normal life and recover. It's possible.
Effect of material	P 101: A lot. I mean, we used to think that someone who was mentally ill, it was difficult for them to marry and difficult for them to work and such. But after we saw the video and after we finished the course, I feel like a lot of these beliefs changed. They can recover and lead a normal life. I mean, changed my mind and it was nice to see things as they really are. I felt as though the video gave me a positive view in how to deal with the patient. That the patient has a life outside the mental ward and that they can improve and recover and live their lives afterward.

**Table 2: Theme 2 (Expectations versus reality)**

Coded	Responses
Afraid	P 70: Okay, from the patients, honestly, I was really afraid of them. I mean, from the stuff you hear socially. I mean that the patient will be violent and stuff like that. When we went to work, we did not find that to be so. They are just [psychiatric] patients.
Afraid	P 73: Umm, I had a scary picture in mind. This is the first time to go to the psychiatric hospital, you know. I was afraid the psychiatric patients wouldn't accept us. Maybe they get, you know, they hit me or throw something at me. .... When I went [to the psychiatric hospital], I saw the exact opposite. It was complete opposite and now I long for the day when I can go back again.
Afraid	P 76: I was afraid of dealing with them [the psychiatric patients]. I had never dealt with them before. I was afraid of what they would do. That they might be aggressive. ... So, that was....before I went I was really afraid. But then after the first day, the second day, the third day, we became used to the situation and such. So, then we were alright with it.
Afraid	P 80: I expected that everyone [the psychiatric patients] would be agitated and screaming but I found that it was, normal. They would quiet down and listen to us. I expected them to be more than that, more vocal and such, but it was okay.
Afraid	P 83: Ah, in the beginning honestly, before I went [to the psychiatric hospital], [I thought] that all the cases would be manic. And, I mean, I felt like...I wouldn't be able to adjust to them [the psychiatric patients]. I felt like it was going to be an experience that would be...too much to bare. And most of all I felt that they [the psychiatric patients] would all be manic and aggressive and that they would hurt me and such. Only, after I started work, my views changed, honestly.

Coded	Responses
Afraid	P 86: The picture that was on my mind was waaay worse than what I actually saw. I expected [psychiatric] patients that I would be unable to deal with.
Afraid	P 90: Yes, uh, honestly I was expecting something really bad .... I was expecting something that wasn't nice and, I mean, that we wouldn't be able to deal with them [the psychiatric patients] at all. Only, it was completely different from what they [school instructors] told me about it. Much better.
Afraid	P 97: When I went there [psychiatric hospital], in the beginning I was really scared because I had the dream in the back of my head. I didn't know what I was expecting. .... That, terrified feeling, started fading by the end of the second week.
Afraid	P 98: I was very afraid of the [psychiatric] patients and of the hospital itself. I thought it would be just like what you'd see in the movies and on the television. ... the first day made a difference for me, I mean, the picture was really different. People [psychiatric patients] who were very normal, normal, normal.... I mean, that basically they [psychiatric patients] are like any normal patient. And you don't feel like there's anything wrong in them.
Afraid	P 99: It's true that in the beginning I was afraid to go to the hospital and meet mentally ill patients and they would all be agitated. Like, the first day I went to the hospital I was very afraid, very afraid.
Afraid, still had to pay attention and keep your distance	<p>P 87: I was very afraid. I wanted to see what [a] psychiatry [patient] was like but I was afraid of how to interact with the [psychiatric] patients and if I could handle them or not. That's what I was afraid of [the] most.</p> <p>P 87: Well we sat mostly with the chronic, male patients, so no, none. They were all normal. Only you still had to pay attention and keep your distance from them. It was normal so no one was hurt. But the acute patients, they were scary. We went one time only to their ward. We went to them and they were scary and we had to pay attention.</p>
felt excited	P101: It [going to the psychiatric hospital] was like, something new that I was embarking on for the first time. ... It was just normal nervousness because I was going to a mental health facility and I had never been to such a place in my life and I didn't know what it would look like from the inside or what the patients would be like or what their illnesses would be. I was just nervous because it was all new.



Coded	Responses
Acute vs. chronic patients  different expectation between male and female patients.	<p>P104: Because we were the first group and they [staff] divided us into the female patients, acute and chronic wards. And they didn't shift us around so the students that went to the acute ward stayed in the acute ward the whole time and the ones that went to the chronic ward stayed in the chronic ward the whole time during the clinical placement. So when the other girls [other student nurses] from the chronic ward came to get things from us, they were shocked from the type of patients in the acute ward. I mean they felt that all the patients were like the ones they had in the chronic ward. And as for us, we imagined that all the patients were experiencing symptoms at the same level of intensity as those in the acute ward that we saw. We didn't imagine there were calmer quieter ones [patients].</p> <p>And we [student nurses] were really, afraid on the first day [at the psychiatric hospital]. We even used to argue over who walked in the middle [of the group], no one wanted to be at the back of the group. ... you would suddenly hear our bags knocking against each other because we were so squeezed together. Especially in the male side. We were very afraid.</p> <p>In the female, we [student nurses] were afraid, especially in the ward with the acute patients.</p>
Previous experience with psychiatric patients	<p>P102: I have seen psychiatric patients; it was not new to me. The participant thus did not have any expectations regarding the clinical placement.</p> <p>I didn't have expectations. I just thought that they [psychiatric patients] were very weak people and that their condition would not improve. Note: that by saying weak people, the participant meant, That they don't have the ability to carry out the activities of daily living on their own.</p>

**Table 3: Theme 3 (Learning through taught content and social contact)**

Coded	Responses
Enjoyable	P 86: Honestly it [the psychiatric course] was an enjoyable and pleasant experience. There were a lot of different cases [psychiatric patients] that I encountered for the first time. Overall it [the psychiatric course] was the best course and the best unit I entered.
Enjoyable	P 90: Really, realllly enjoyable. I mean, so far, it's [the psychiatric course] almost the best course in nursing that we [student nurses] took because the patients that we dealt with were different.

Coded	Responses
Beneficial	P 70: Okay. Actually it [the psychiatric course] was good and bad for me because it's a new experience. Umm, and it's [the psychiatric course] a new course. Because I was able to practice things we had learned in theory. Umm, the bad, I think was that our knowledge, my knowledge was not, I mean, enough to go and practice and deal with the [psychiatric] patients. It [the psychiatric course] was hard for me, a little. I expect that if we had stayed longer, it [the experience of the psychiatric course] would have been better.
Beneficial	P 87: I liked this course [the psychiatric course], in that it was different from other courses in the way that you deal with [psychiatric] patients.
Beneficial	P 83: I liked it [the psychiatric course], honestly. I felt as though, the [psychiatric] hospital and patients, and putting the theory to work was a great thing, honestly. ... It [the psychiatric course] was enjoyable.
Beneficial	P 73: Ahh, actually the clinical, the psychiatric course...it was a good course, yeah, I enjoyed the course. Umm...you know it is very nice to deal with a psychiatric patient.
Beneficial	P 90: Alright, the most important thing was that we were learning the most common illnesses, psychiatric, and its causes and how to deal with those patients.
Positive experience	P 101: So for me it [the psychiatric course] was an experience that changed a lot of things. The way I thought about these people and how we deal with them [psychiatric patients].
Positive experience	P 90: We [student nurses] would go to an area and deal with a [psychiatric] patient and at the beginning there was no acceptance [from the psychiatric patients], because we [student nurses] were strange people and such. Then after a week, for example, you would find that they [psychiatric patients] were waiting for us [student nurses], and knew that we [student nurses] would come at a certain time. We'd see an observable change in the patients. I mean, when we first went, you'd see what their condition was, then after we left, you'd see how they [their behaviors] became.
Positive experience	<p>P 95: When I took the course [the psychiatric course], I learned a looooot of things, and a looooot of concepts were corrected. First of them, honestly, was the nature of schizophrenia and the symptoms of schizophrenia, delusion and hallucinations. I mean these occurred a lot. We saw the symptoms on the patients. When we took [the course], with Dr. H [a professor in school], symptomatology, we didn't understand them at all but when we went and saw the reality of it, we saw that it was the same symptoms.</p> <p>P 95: So now after I practiced it [things learned from the psychiatric course] ... I started teaching the people around me that, no they're [the psychiatric patients] not crazy, they're just mentally ill. They can go back to their lives and live it normally especially those who are bipolar and such.</p>

Coded	Responses
Positive experience	P 104: Ok, it [the psychiatric course] was...a new experience for us...and it [the psychiatric course] was something new for us to see. At first we [student nurses] were really shocked, we were afraid. Then the next day, that went away. After that we grew to love the course itself and we liked to apply it to those people [psychiatric patients], our patients, and we liked to talk to them. Even we [student nurses]...would... use the communication and the activities we learned in a really easy way. And we noticed changes in the [psychiatric] patients with us, they responded to us. Even though we weren't there [the psychiatric hospital] for a long time, they responded to us and we saw the results, I mean they [the psychiatric patients] were getting better.

**Table 4: Theme 4 (Hospital environment)**

Coded	Responses
Overcrowded	... it was like forty patients in one ward.” as described by a participant (P 90).
Not clean Not conducive of treatment/recovery	And I felt that the environment [of the psychiatric hospital] was important, that it [the hospital] had to be clean. It helps the patient[s] improve. I felt that the environment was not something they [the hospital staff] cared about in the hospital (P 87).
Not conducive of treatment/recovery	P 73: But the environment [of the psychiatric hospital] was not appropriate.
Not clean Not conducive of treatment/recovery	P 87: ... they [the psychiatric patients] complained that the hospital wasn't clean. ... That the environment [of the psychiatric hospital] wasn't appropriate for the treatment of patients.
Not conducive of treatment/recovery	P 97: I really didn't like the building there [of the psychiatric hospital] because I felt caged. I am pretty sure they [the psychiatric patients] felt the same because they were just locked between four walls and they had no activities whatsoever. During national day we [nurse students] threw them [the psychiatric patients] a party and they were really like...you know that small party really meant a lot to them. They [the psychiatric patients] said that it was as if they went out and most of them when you ask them what do you want? Most of them will say I just want to go out for a while and come back. So I really felt they [the psychiatric patients] felt caged.
Not clean Not conducive of treatment/recovery	P 99: All of it. Cleanliness, cleaning. Ventilation, poor ventilation. There is no, what do you call it, [appropriate] entertainment to keep them [the psychiatric patients] content/occupied and such.

Coded	Responses
Not conducive of treatment/recovery	P 111: ...I thought that they [staff of the psychiatric hospital] would make [it] available to them [the psychiatric patients]...for example, some form of entertainment.
Not clean  Not conducive of treatment/recovery	P104: I mean, I imagined it [the psychiatric hospital] to be more organised. Honestly, we [student nurses] objected to some things and we tried to talk to the nurses [at the hospital] about it, including the décor and the colors in the place, the cleanliness itself. The cleanliness [of the psychiatric hospital] was really bad, I mean. And there was an incident that happened in front of me, the doctor was coming, the one in charge of the place, the whole ward was suddenly being cleaned and the worker would come, poor woman, and clean, and they did showers and clean beds. It was a difficult incident. I mean, they [the psychiatric patients] were living in a place that was...I mean, we used to go in feeling grossed.
Risk of infection	There was also the problem that they [staff of the psychiatric hospital] had the patients mixed in the ward together, there was a HIV patient with the rest of the other patients. So...I don't know. We [student nurses] would walk around the place [the psychiatric hospital] and feel afraid of infection for real because all the patients were [placed] together.

**Table 5: Theme 5 (Staff attitudes and behaviour)**

Coded	Responses
Lying	And the way the staff [of the psychiatric hospital] treated the patients... Umm, okay, sometime they [staff] are lying to them [patients], I didn't feel like they [staff] treated them [patients] like...umm...as a real person, I mean. (P70)
Ineffective communication	P 102: ... the communication with the staff. It's hard. And some patients would complain that everything was prohibited for them.
Inappropriate interaction (yelling)	P 87: ... Even the way the nurses interacted with them [patients]. I saw that they [staff nurses] would just yell at them [patients], and handle them [patients] using threats. And maybe they [staff nurses] would say "if you don't obey I will lock you up or send you... They [staff nurses] would handle them [patients] using threats and wouldn't deal with them [patients] correctly.
Inappropriate interaction (yelling)	P 101: ... I mean another example, one of the patients was talking when we [students nurses] were in orientation on the first day and the ward nurse was telling us about the place and this patient kept saying Hi to us every few minutes. The ward nurse screamed at her [the patient].
Inappropriate interaction (Violence)	P 99: Some of the nursing staff would isolate patients and tie them up, very restrictively. And sometimes some staff would hit the patients and such. Also, they [staff nurses] do not give them [patients] psychological support.
Inappropriate interaction (violence)	P 101: ... there was another incident, in the male section. There was one guy who was a little violent and he wanted to fight and I don't know what. There should have been people who came and restrained him but what happened is that they [staff] came and grabbed and hit him. So that affected us [student nurses] all. So to try and restrain him yes, but it shouldn't have gotten to the level of hitting.
Staff reasoning	P 111: ... They [staff] said the patients here [at the psychiatric hospital] are agitated so it won't work to give them [patients] anything. So it was the nature of the work there [the psychiatric hospital].
Justification of staff behaviour	... Also the number of nurses there [at the psychiatric hospital]. Maybe there weren't enough nurses there who specialised in psychiatry and how to deal with psychiatric patients and the nurses just dispensed the medications and that's it. They [staff] didn't do any activities for the patients or take an interest in them [patients], except to dispense the medications. (P87)
Patient complaints	P 104: Ahh, ok, the way the nurses acted and...also...the patients would complain about, like I said, they [patients] complained about the way they [patients] were treated, but I don't know...with psychiatric patients, maybe the stuff that is being said is not real.
Patient and staff interaction	P 80: They [staff and patients] interacted well, thank God, it was good, not bad.

Coded	Responses
Patient and staff interaction	P 98: They [patients] didn't have problems, I mean, with the staff. I mean, maybe there were, some of them [patients] were more comfortable in the hospital, as they [patients] felt it was safer for them [patients] than home. They [patients] were comfortable in a way, the place [the psychiatric hospital] was good, but some of them [patients], they missed their families and such. But none of the patients had problems from the staff themselves or the nurses or anything.

**Table 6: Theme 6 (Patient behaviour)**

Coded	Responses
Stable and calm	P 83: We [student nurses] started on the chronic ward and I felt that my impression changed a little. I felt like the patients were quiet and they wouldn't do stuff like that [for example, agitated/aggressive behavior]. Then when I went to the acute ward and I was surprised.
Stable and calm Normal	P 102: Okay there was this patient in the male section. He [the patient] spoke well, he was very polite and was very well groomed and had a high level of hygiene and such. And I mean, in the beginning I said he [the patient] was a normal person and wondered why he was hospitalised? I wasn't convinced that he was a [psychiatric] patient.
Stable and calm Cooperative and helpful	P 83: ... Yes, he [patient A] was schizophrenic and he was, God be praised, stable and he was very active... He [patient A] was better than the others [patients], I mean. There was even one patient who was blind, he couldn't see. So he [patient A] was always the one who fed him [the blind patient] and sat with him [the blind patient] and even if he [the blind patient] needed anything, he [patient A] was the one who took care of everything for him [the blind patient]. I mean, God be praised, he [patient A] was very helpful, honestly.
Cooperative and helpful Normal	P 76: He [the patient] was very cooperative with us [student nurses] and normal. To the degree that you would not say that he [the patient] was a psychiatric patient. But when you sit and interact with him, and talk to him, and talk about things, you find out why.
Educated	P 87: He was, I mean, he [the patient] was educated and had graduated and also he knew languages and...that's it. It's just that he understood his illness and everything and his treatment and he knew what he was doing and the symptoms of his disease and everything about his condition.
Agitated	P 80: ... She [the patient] had, really, I mean, delusion, hallucination, everything. I mean, we [student nurses] went in the first day and she was screaming, she didn't want medication and I don't know what to do. The nurses came immediately and restrained her and they [staff] all leapt at her, they [staff] didn't know how to deal with her [the patient].
Aggressive	P 101: There was just one patient, she was aggressive and such. ...

Coded	Responses
Aggressive	P 104: She [the patient] was really aggressive. And there were things that she did that were strange. Maybe because of the grandeur, I mean, because of her delusions of grandeur she treated everyone there [at the hospital] as her slaves, even the ward nurses. ... There were a lot of problems and it was difficult to deal with her [the patient]. ... Even when it was time for me to take another case, I said I wouldn't take a manic case again. It was a little hard. Hard to make her [the patient] happy, hard to please her and everything was not to her liking.
Student sympathetic of patient	P 73: I felt sorry for her [the patient] and her situation. What exactly would happen to her, and she wouldn't know and the confusion she felt and her illness.
Student sympathetic of patient	P 80: I felt sorry for her [the patient] and I was shocked by the nursing [situation] because I honestly didn't expect this kind of thing [inappropriate treatment of the patients] from nurses in the psychiatric ward. It was bad.
Student sympathetic of patient	P 76: I felt very sad for him [the patient]. And he drew me a drawing of a kitchen design and such. It was really an architect level drawing. And he [the patient] told me he studied at King Abdul-Aziz University and he even told me the names of his classes.
Student sympathetic of patient	P 87: Sad about him [the patient] because even his family rejected him and wouldn't accept him, even though he was not at all aggressive. He [the patient] was normal.
Student sympathetic of patient	P 99: I really sympathised with him [the patient]. You know Al-Amal hospital for drug addicts?"
Student sympathetic of patient	P 70: Ah, oh my God. Honestly, it was really, I mean, very, very emotional. I mean, ok, it was a new experience for me. Always when I went back home, I couldn't stop thinking about those [psychiatric] patients. I couldn't. Honestly, I mean, I really shouldn't be working in this field [psychiatry] at all because I would really get attached. I couldn't ever, stop myself from thinking about them [the patients] and their conditions.
Student sympathetic of patient	P 104: I was sad for her [the patient]. As much as her behaviour was antagonising, even the girls [student nurses] would say that if she was sane, then we would leave her and go. But every time we [student nurses] remember she has a disease...we would calm down a bit. We felt sad for her and what she did...and honestly, I myself felt sad for her. And...maybe I didn't sympathise with her a lot, not as much as I sympathised with the schizophrenic patients. They [the patients] should be sympathised with."
Student sympathetic of patient	P 111: I wished I could do something for him [the patient]. I mean, help him if only a little. I said, God willing, when I graduate, I will try and change people's perspective [about psychiatric patients]. Since I'm a student [nurse] and I'm studying, maybe I can change it [people's perspective about psychiatric patients]. But for me to change what all the people think [about psychiatric patients], that would be difficult for me...but as much as I can, I mean I will try.

**Table 7: Theme 7 (Therapeutic activity)**

Coded	Responses
Listening	P 73: For real, people [the patients] sometimes find themselves in a condition, that someone really needs to be heard. Regardless of what they did or didn't do but people really need someone to listen to them and sit with them. The other patient, the male that I sat with too. I felt really that mental patients can't hurt anyone. They could never hurt us, they could maybe hurt themselves.
Listening	P 80: Most of the patients complained that no one talked to them. They needed someone to talk to. They [the patients] were happy when we [student nurses] came and talked to them [the patients].
Listening	P 102: I was at the psychiatric hospital and did patient care. Cared for the patients, and did group therapy. ... stay with the patient and talk. About her [the patient] feelings, her disease, when she noticed the symptoms and how they [staff] deal with them [patients].
Entertainment	P 98: Mostly, we [student nurses] just went there [the hospital] and saw patients, what it was like and we took cases and we did assessments for them [the patients]. And, sometimes we [student nurses] gave support to the patients. Of course we [student nurses] did activities with them [patients] and such. We [student nurses] sat with them [patients] for a while.
Entertainment	P 97: we [student nurses] got colors and books, we [student nurses] painted with them [patients], we [student nurses] got some knitting stuff, we [student nurses] had group breakfast and once we [student nurses] had like a makeover contest. We [student nurses] got some makeup and nail polish, they [patients] wore like make-up and we [student nurses] acted like hairdressers and they [patients] acted like clients. Just to pamper them [patients].
Entertainment	P 99: I met with the patients and cared for them and we sat together and did play therapy and such.
Isolation	P 95: ... they [hospital staff] would put her [the patient] in isolation by herself and such.
Isolation	P 70: So I sat with her [the patient] in the room and tried to calm her down. I told her "don't be afraid. That's it, he [the husband] won't come near you" and stuff like that. And she [the patient] would calm down and we put her in a room by herself until the doctor came and saw her.
Restraint	P 102: Then he [the patient] was restrained. He [the patient] hit the [male] nurse and the [male] nurse hit him [the patient]. Then they [staff] restrained him [the patient] to the bed. It was a very scary situation. Everyone was scared. He [the patient] was impolite and would talk impolitely. Aside from him [the aggressive patient], other patients were all okay.



Coded	Responses
Hands-on experience	<p>P 83: Mmm, I remember that it was just one that was in a room and she [the patient] would ruin furniture and really...the room she really ruined it. Dr. H [physician's name removed] was with me so Dr. H went in just to tell her [the patient], you know to calm down. We [staff] wanted to see what was wrong and such. And right away, she [the patient] had a bottle of water and started pouring it on the doctor and threw stuff she [the patient] was holding. And she [the patient] was going to hit her [the doctor]. Dr. H was trying to cover herself [the patient] with a sheet and was trying to keep away from the patient and such. Then she [the doctor] left the room.</p> <p>P 83: She [the doctor] didn't scold or anything, she [the doctor] just tried to cover her face and left the room. And she [the doctor] said "That's it leave her [the patient] alone. She's [the patient] agitated and such. That's it, let her [the patient] get comfortable". And she [the doctor] left and the situation was okay with her [the doctor] and she [the doctor] knew how to keep control.</p>
Isolation  Hands-on experience	<p>P 111: There was this other patient, she was really agitated. They [staff] had her [the patient] locked up in a room by herself. Then the doctor took me to see her [the patient] and said that this patient had gotten used to someone and loved him and such. ... Then suddenly while we were sitting there, I mean, we were sitting with the doctor and she [the patient] got up and tried to hit me. I really didn't expect that. I thought this patient liked me and knew me, then suddenly she [the patient] gets up and tries to hit me and the doctor pulled her away.</p>
Medication  Other therapeutic options	<p>P 83: ... They [the patients] could have been healthier if there had been other treatment options available to them, more than just medication, I mean. I mean, there are patients that enjoy decorating and activities and stuff like that. We used to do activities with them; we used to do stuff with them. They got better, they improved, they were excited and it was better for them. ... But in the hospital there is nothing except that they would give them medication. And I saw that...I felt that...like...a patient with psychiatric issues needs a combination of therapies not just medication.</p>

**Table 8: Theme 8 (Changing perspectives)**

Coded	Responses
Not aggressive	<p>P 80: My impression of the patients was good, God be praised. I mean, their behavior was good. They [psychiatric patients] weren't aggressive in any way as I imagined before working with them.</p>
Acceptance Not aggressive	<p>P 83: ... I used to be unable to start a conversation with them [psychiatric patients] because I was afraid they would do something or such. Then it became normal. We could do activities with the patients and sit together and such. ... They could be hurt more easily than they could hurt.</p>

Coded	Responses
Acceptance Not aggressive	P 76: ... I used to think that, when I dealt with a psychiatric patient, I used to think that all the patients would be aggressive and I found the opposite to be true. ... I used to think that they broke stuff and hit people and the like. It turned out that they didn't...
Acceptance	P 98: You feel like they're [psychiatric patients] very simple people. You feel that they're normal patients. I mean, normal...human beings. They [psychiatric patients] need to be accepted.
Acceptance	P 86: Of course it changed a looooooot. I learnt that patients with mental illnesses are fundamentally the same as patients with physical illnesses that there isn't a difference between the two. They each require special care and treatment. And it is normal for me and become a psychiatric nurse. There isn't a problem in me becoming one.
Acceptance	P 70: Just as I told you before that they are just patients with illness. And we are, as nurses, we should give them their, as a human, their complete dignity. We should treat them [psychiatric patients] the same way we treat others- no there will be a difference between them and those with physical illness, patients who have physical illness.
Acceptance  Possibility of recovery	P 98: Um, truthfully, my views of people with mental illness changed. Before, I thought they were all crazy people and people that there were no way you could get through to them. But all that changed and I now believe they are people who are normal .... What these patients experience are temporary symptoms experienced for a short time or a phase but after treatment and care they can become stable and so we shouldn't isolate them from society. I mean they're not all a danger to the community and society there are some people like that but there are also people who are educated about their illness and normal. Because when these patients are outcast from society and by their families that will only make their disease symptoms worse.